06290562   **Image available**
RETRIEVAL METHOD AND DEVICE FOR RESOLVING HETER-OGENEOUSNESS OF **PLURAL
DATA   BASES** , AND RECORDING MEDIUM HAVING RECORDED MULTI-DATA BASE
HETEROGENEOUSNESS RESOLVING RETRIEVAL PROGRAM

ABSTRACT
PROBLEM TO BE SOLVED: To provide a retrieval method and device for
resolving heterogeneousness of **plural   data   bases** , which resolve the
heterogeneousness of **plural   data   bases** different even in at least a
part of data structures, DBMS(data base management system), and data
expression without designation of correspondence relations or conversion
rules for every retrieval **request** to retrieve data from **plural   data
bases** , and a record ing medium where a retrieval program for resolving
the heterogeneousness of **plural   data   bases** is recorded.

SOLUTION: Data expression formats, conversion functions between data
expression formats, etc., are stored and managed in an information resource
dictionary 7a and a conversion function library 9, and these data
expression formats and conversion functions between the expression formats
are used so that an inquiry conversion part 5 converts the expression
format of data of a retrieval **request** to that of data used in a retrieval
object data base 21 to generate a retrieval **request** statement, and a data
base communication control part 11 uses this retrieval **request** statement
to retrieve the retrieval object data base 21.

06029282   **Image available**
SIMILAR EXAMPLE TRANSLATION SYSTEM

ABSTRACT
PROBLEM TO BE SOLVED: To perform standardized translation fast with simple
constitution by a machine translation system which makes use of an example
data base.

SOLUTION: In the example **data   base** 8 **many** translation sentences are
stored and identical or similar sentences are extracted for translation.

When no similar sentence is found, the original text is **divided** and identical or similar examples are extracted for the **divided** sentences for translation. When no similar sentence is found for a **divided** sentence, translation is carried out by words or idioms by performing retrieval from a **dictionary** data base 9. The translation result is postedited by referring to the example data base 8 and **dictionary** data base 9. The completed translation sentences are stored in the example data base 8 together with the original text. Each time translation is performed, example data are stored, so the example data base is automatically enriched. The standardized translation is performed fast only by using simple grammatical rules 3, 5, and 6, the example data base 8, and the **dictionary** data base 9.

26/5/6   **(Item 6 from file: 347)**
DIALOG(R)File 347:JAPIO

06018721   **Image available**
ACCESS METHOD FOR **PLURAL DATA BASES** AND RECORDING MEDIUM RECORDING ACCESS PROGRAM OF **PLURAL DATA BASES**

PUB. NO.:   10-301821 [JP 10301821 A]
PUBLISHED: November 13, 1998 (19981113)
INVENTOR(s):   KAWASHITA MITSURU
             SUZUKI GENGO
             MURATA TATSUHIKO
             MACHIHARA HIROKI
APPLICANT(s): NIPPON TELEGR & TELEPH CORP <NTT> [000422] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.:   09-109356 [JP 97109356]
FILED: April 25, 1997 (19970425)
INTL CLASS: [6] **G06F-012/00** ; **G06F-017/30**
JAPIO CLASS: 45.2 (INFORMATION PROCESSING -- Memory Units); 45.4 (INFORMATION PROCESSING -- Computer Applications)

ABSTRACT
PROBLEM TO BE SOLVED: To retrieve data among **plural data bases** in relation without defining the relation of tables among the **plural data bases** beforehand by using a **dictionary** for registering the type of the value of a data item and the range of the value, detecting the relation of the table and retrieving the data of the **plural data bases** in relation by using the detected relation.

SOLUTION: An operator reports a table name to be accessed and the extraction **request** of the table capable of being related to the table based on information inside the **dictionary** 1 through an operator coping part 2. The operator coping part 2 informs a relation detection part 3 of them, the relation detection part 3 extracts the table provided with the data item of the type of the same value as the data item present in the table of the specified table name and the candidates of the table capable of being related are reported to a relation judgement part 4. The relation by the overlap of the range of the value is judged by the relation judgement part 4, the overlapping range is detected and the relation information is reported to the operator coping part 2.

26/5/7   **(Item 7 from file: 347)**
DIALOG(R)File 347:JAPIO

05860439   **Image available**
INFORMATION RETRIEVING METHOD, ITS SYSTEM, RECORDING MEDIUM RECORDING INFORMATION RESOURCE **DICTIONARY** DATA AND RECORDING MEDIUM RECORDING INFORMATION RETRIEVING PROGRAM

PUB. NO.:   10-143539 [JP 10143539 A]

ABSTRACT

PROBLEM TO BE SOLVED: To facilitate information retrieval corresponding to
plural different **data** **base** systems connected to a network.

SOLUTION: Referring information for accessing to **plural** **data** **base**
system is stored in advance and at the time of obtaining an information
retrieving **request** (S101), this information retrieving **request** is
analyzed (S102) to specify which data base system information corresponding
to the retrieving **request** is stored, by referring to reference
information. In addition, information on how to obtain information is
obtained (S103 and S104), an information retrieval instructing sentence is
generated based on information showing the storing position and the
obtaining method corresponding to the information retrieving **request**
(S105), a retrieving **request** is given to a data base system
corresponding to the information retrieving **request** (106) and the
retrieving result is provided for a user (S107).

26/5/8 **(Item 8 from file: 347)**
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

05476509 **Image available**
MULTIPLE - DATA - BASE RETRIEVAL DEVICE

ABSTRACT

PROBLEM TO BE SOLVED: To perform retrieval from **multiple** **data** **bases**
on the basis of an array of words without paying attention to a schemer by
generating a retrieval command according to a selected concept **dictionary**
and performing retrieval from a data base according to the generated
retrieval command.

SOLUTION: A concept **dictionary** selection part 11 determines a concept
dictionary to be retrieved according to a **vocabulary** that is being
inquired. A relation determination part 12 determines the relation between
words according to the concept **dictionary** of the selected data base. A
retrieval command generation part 13 converts the array of **vocabularies**
into a retrieval command according to the relation between the words. This
retrieval command is executed by a retrieval command execution part 14. A
retrieval command execution part 14 **requests** a data base management
system which manages element data bases to execute the command as the
conversion result, thereby performing retrieval. Its retrieval result is

displayed at a retrieval result display part 15.

05235078   **Image available**
DESIGN SUPPORT DEVICE

PUB. NO.:   08-190578 [JP 8190578 A]
PUBLISHED: July 23, 1996 (19960723)
INVENTOR(s):   HAGA NORIYUKI
               AKASAKA SHINGO
               ARAI YOSHIHISA
               SHIBATA NOBORU
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP
               (Japan)
APPL. NO.:   07-000021 [JP 9521]
FILED: January 04, 1995 (19950104)
INTL CLASS: [6] **G06F-017/50 ; G06F-017/30**
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications); 26.9
               (TRANSPORTATION -- Other)
JAPIO KEYWORD:R060 (MACHINERY -- Automatic Design)

ABSTRACT
PURPOSE: To provide a design support device which evaluates the similarity
of shape to present the result even in the case that shape features of a
product are included in **requested** specifications at the time of
similarity retrieval of design examples.

CONSTITUTION: In this design support device, a design example **data   base**
30 where **plural** design examples of a drawing or the like characterized
by features of the shape or the like of the product are preliminarily
stored, a shape feature input means 10 which can input the shape features
of **requested** specifications, a shape feature evaluation means 20 which
compares inputted shape features with shape features of examples
preliminarily registered in the design example data base 30 to calculate
the degrees or similarity, and a retrieval result display means 70 which
ranks examples in the order of degrees of similarity and displays them
are provided to generate the design result meeting the **requested**
specifications or information useful for design of **requested**
specifications.

05081107   **Image available**
FACILITY MANAGEMENT SYSTEM

PUB. NO.:   08-036607 [JP 8036607 A]
PUBLISHED: February 06, 1996 (19960206)
INVENTOR(s):   KAMIYA HIROYUKI
APPLICANT(s): MEIDENSHA CORP [000610] (A Japanese Company or Corporation),
               JP (Japan)
APPL. NO.:   06-171496 [JP 94171496]
FILED: July 25, 1994 (19940725)
INTL CLASS: [6] **G06F-017/60 ; G06F-017/30**
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JAPIO KEYWORD:R060 (MACHINERY -- Automatic Design); R131 (INFORMATION
               PROCESSING -- Microcomputers & Microprocessers)

ABSTRACT
PURPOSE: To improve the operability and to very easily acquire required
information.

CONSTITUTION: A database 1 is built up by taking facilities especially into
account. The database 1 have data of facilities to be managed such as
drawings and **various** documents. The **database** 1 is linked to a facility
information expression **section** 3 being a retrieval object via an
information retrieval interface 2. The information retrieval interface 2
uses drawings expressing a facility totally. The facility information
expression **section** 3 expresses various information relating to the
facility itself. A facility point-out **section** 4 points out a desired
facility based on tne facility information and a 1st processing **section** 5
ranks the facility information according to an object of information
retrieval. The 1st processing **section** 5 reserves a display area according
to the **ranking** of the facility information and processes the vertical
relation of display patterns. After the facility information is displayed,
a 2nd processing **section** 6 designates the relation of drawings and
documents in the information to acquire new information.

   26/5/14   (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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015633373   **Image available**
WPI Acc No: 2003-695555/200366
XRPX Acc No: N03-555344
   **Affinity based similarity search method, involves generating inverted
   list of document identifiers for each term in** lexicon **and evaluating
   search query using affinity lists and inverted lists**
Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: AGGARWAL C C; YU P S
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind Date   Week
US 6587848   B1   20030701 US 2000520551 A   20000308 200366 B

Priority Applications (No Type Date): US 2000520551 A 20000308
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
US 6587848   B1   10 G06F-017/30

Abstract (Basic): US 6587848 B1
     NOVELTY - The method involves generating an affinity list for each
term in a **lexicon** of terms of documents to be used in the similarity
search. An inverted list of document identifiers is generated for each
term in the **lexicon** using iterative techniques on the affinity list.
The search query is evaluated using the affinity and lists list where
the query originates from the user at the client device.
     DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
     (a) an apparatus for performing an affinity based similarity search
     (b) an article of manufacture for performing affinity based
similarity search, comprising a machine readable medium containing
programs which are executed.
     USE - Used for performing similarity searches in documents.
     ADVANTAGE - The quality of the results from search engine are less
sensitive to the choice of search terms. The method takes in to account
words, which are not included in the query that increases the
specificity and **effectiveness** of the **query** .
     DESCRIPTION OF DRAWING(S) - The drawing shows a flow diagram
illustrating the process of **rank** ordering documents based on a
similarity value.
     pp; 10 DwgNo 5/5
Title Terms: AFFINITY; BASED; SIMILAR; SEARCH; METHOD; GENERATE; INVERT;
  LIST; DOCUMENT; IDENTIFY; TERM; EVALUATE; SEARCH; QUERY; AFFINITY; LIST;
  INVERT; LIST
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**

26/5/17   (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014891914   **Image available**
WPI Acc No: 2002-712620/200277
XRPX Acc No: N02-562149
   Multiagent type integrated database system for query processing, refers
   information about predicates for converting query which is thrown into
   integrated database system, into several query sets
Patent Assignee: HITACHI LTD (HITA); NISHIZAWA I (NISH-I); SHINTANI T
   (SHIN-I); USHIJIMA K (USHI-I)
Inventor: NISHIZAWA I; SHINTANI T; USHIJIMA K
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020120618	A1	20020829	US 2001932114	A	20010820	200277	B
JP 2002259425	A	20020913	JP 200153474	A	20010228	200277	

Priority Applications (No Type Date): JP 200153474 A 20010228
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020120618 A1			20	G06F-007/00	
JP 2002259425 A			13	G06F-017/30	

Abstract (Basic): US 20020120618 A1
      NOVELTY - An expansion unit (9) refers to information about
   predicates used in **query** processing and the degree of the connections
   of the predicates that are stored in a predicate **dictionary** (4) for
   converting a **query** which is input into the integrated database system
   (1), into several **query** sets.
      DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for
   recorded medium storing **query** processing program.
      USE - For **query** processing e.g. for DNA sequence analysis
   application.
      ADVANTAGE - By referring to the information about the predicates
   for converting the **query** input into the **database** system into
   several **query** sets, the cost of the **query** processing is minimized
   and accurate **query** results are obtained.
      DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
   the integrated database system.
      Integrated database system (1)
      Predicate **dictionary** (4)
      Expansion unit (9)
      pp; 20 DwgNo 1/11
Title Terms: TYPE; INTEGRATE; DATABASE; SYSTEM; **QUERY** ; PROCESS; REFER;
   INFORMATION; CONVERT; **QUERY** ; THROW; INTEGRATE; DATABASE; SYSTEM; **QUERY**
   ; SET
Derwent Class: T01
International Patent Class (Main): **G06F-007/00 ; G06F-017/30**
File Segment: EPI

26/5/18   (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014766372   **Image available**
WPI Acc No: 2002-587076/200268
XRPX Acc No: N02-465713
   **Medication usage monitoring system displays medication information such
   as its** influence **effects, applicable patients, adverse effects related
   to input prescription**
Patent Assignee: JOVI KK (JOVI-N); KAISEI YAKKYOKU KK (KAIS-N)
Number of Countries: 001 Number of Patents: 001

Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 2002197188   A   20020712 JP 2000395388 A   20001226 200263 B

Priority Applications (No Type Date): JP 2000395388 A 20001226
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 2002197188 A   21 G06F-017/60

Abstract (Basic): JP 2002197188 A
     NOVELTY - The monitoring system instantaneously judges the
information such as its medication's **influence** effect, group of
patient for whom it is applicable, its adverse effect on mishandling,
etc., related to an input medication prescription, by **searching**
several   databases . A display screen displays the judged information
as a list screen.
     DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the
following:
     (1) Medication usage monitoring method; and
     (2) Machine readable recording medium storing program for
medication usage monitoring method.
     USE - Used for patients such as pregnant women, lactating women,
diseased patients, etc.
     ADVANTAGE - The content of prescribed medication is confirmed
correctly before using.
     DESCRIPTION OF DRAWING(S) - The figure shows the prescription
screen. (Drawing includes non-English language text).
     pp; 21 DwgNo 11/17
Title Terms: MEDICATE; MONITOR; SYSTEM; DISPLAY; MEDICATE; INFORMATION;
  INFLUENCE ; EFFECT; APPLY; PATIENT; ADVERSE; EFFECT; RELATED; INPUT;
  PRESCRIBED
Derwent Class: T01
International Patent Class (Main): **G06F-017/60**
File Segment: EPI

  26/5/19   (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014604509   **Image available**
WPI Acc No: 2002-425213/200245
XRPX Acc No: N02-334347
  Virtual data warehouse creation method for database integration, involves
  storing several data elements that correspond to at least one data
  element of several   databases , **in global** dictionary **system**
Patent Assignee: CAPPI M (CAPP-I)
Inventor: CAPPI M
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
US 20020038308 A1   20020328 US 99320896   A   19990527 200245 B

Priority Applications (No Type Date): US 99320896 A 19990527
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
US 20020038308 A1   32 G06F-007/00

Abstract (Basic): US 20020038308 A1
     NOVELTY - Several data elements that correspond to at least one
data element of **several   databases** (108-114), are stored in a global
 dictionary system. The relationships between the two or more data
elements are identified.
     DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
     (a) Data retrieval method;
     (b) Data retrieval system;

(c) Global data **dictionary** system
        USE - For creating virtual data warehouse employing **several
databases** .
        ADVANTAGE - Facilitates syntactic and semantic integration of
several databases into a single logical entity, which is accessible
through one global data **dictionary** . Hence allows users to conduct
expansive **searches** or **queries** , regardless of the database
management system.
        DESCRIPTION OF DRAWING(S) - The figure shows the structure of
database system.
        Databases (108-114)
        pp; 32 DwgNo 1/20
Title Terms: VIRTUAL; DATA; WAREHOUSE; CREATION; METHOD; DATABASE;
   INTEGRATE; STORAGE; DATA; ELEMENT; CORRESPOND; ONE; DATA; ELEMENT; GLOBE;
   DICTIONARY ; SYSTEM
Derwent Class: T01
International Patent Class (Main): **G06F-007/00**
File Segment: EPI

   26/5/20   (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014537337   **Image available**
WPI Acc No: 2002-358040/200239
   System and method for semiconductor electronic commerce
Patent Assignee: HONG M H (HONG-I)
Inventor: HONG M H
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
KR 2001086665 A   20010915 KR 200010337   A   20000302 200239 B

Priority Applications (No Type Date): KR 200010337 A 20000302
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
KR 2001086665 A   1 G06F-017/30

Abstract (Basic): KR 2001086665 A
        NOVELTY - A system and method for semiconductor electronic commerce
   are provided to synthetically offer information by connecting a parts
   information DB, an enterprise information DB, a transaction information
   DB, a newspaper information DB, a **dictionary** information DB, a job
   offer/hunting DB, a new product information DB and so on.
        DETAILED DESCRIPTION - A semiconductor electronic commerce system
   is composed of a server(100), **various databases** (110-160), a parts
   supply enterprise(330), a client(340), and a job offerer/seeker(350).
   An enterprise information DB(160) stores enterprise information. A
   parts information DB(150) stores parts information. A transaction
   information DB(140) stores transaction information. A newspaper
   information DB(110) stores newspaper information. A **dictionary**
   information DB(170) stores **dictionary** information. A job
   offer/hunting DB(120) stores job offer/hunting information. A new
   product information DB(130) stores new product information. In the case
   of **searching** for enterprise information(310), the client(340)
   extracts enterprise information from the enterprise information
   DB(160). In the case of **searching** for **dictionary** information(320),
   the client(340) extracts **dictionary** information from the **dictionary**
   information DB(170). The parts supply enterprise(330) extracts parts
   information from the parts information DB(150). The job
   offerer/seeker(350) extracts job offer/hunting information from the job
   offer/hunting DB(120).
        pp; 1 DwgNo 1/10
Title Terms: SYSTEM; METHOD; SEMICONDUCTOR; ELECTRONIC
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**

 26/5/23   (Item 13 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014262438   **Image available**
WPI Acc No: 2002-083136/200211
XRPX Acc No: N02-061902
  **Natural language interface for providing natural query capability to
  electronic users of enterprise databases by learning from users to
  improve effectiveness and efficiency**
Patent Assignee: RENSSELAER POLYTECHNIC INST (RENS-N)
Inventor: BOONJING V; HSU C
Number of Countries: 097 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200190953	A2	20011129	WO 2001US16459	A	20010521	200211	B
AU 200163354	A	20011203	AU 200163354	A	20010521	200221	
EP 1282870	A2	20030212	EP 2001937641	A	20010521	200312	
			WO 2001US16459	A	20010521		

Priority Applications (No Type Date): US 2000205725 P 20000519
Patent Details:

Patent No	Kind Lan Pg	Main IPC	Filing Notes
WO 200190953	A2 E 73	G06F-017/30	

    Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
    CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
    IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
    PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
    Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
    IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

| AU 200163354 | A | G06F-017/30 | Based on patent WO 200190953 |
| EP 1282870 | A2 E | G06F-017/30 | Based on patent WO 200190953 |

    Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
    LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200190953 A2
      NOVELTY - A processor (202) receives a natural language query and
   plural database objects (204) and produces a query result, such
   as information relevant to the combination of the query and the
   objects. The query is mapped to the objects using a reference
   dictionary (208) and a reference **dictionary** object identifier (205)
   parses the queries and generates one or more objects recognized in
   the **dictionary** . The processor determines the optimal interpretations
   of the received objects and a mapping processor (206) performs mapping
   between incoming objects and database objects, to generate database
   queries , while a keyword (209) points to semantic objects, pointing
   ultimately to the database object values.
      DETAILED DESCRIPTION - AN INDEPENDENT CLAIM is included for a
   method for processing a natural language input.
      USE - Recognizing natural language via a user interface.
      DESCRIPTION OF DRAWING(S) - The drawing shows a natural language
   query processor
      Processor (202)
      Database objects (204)
      Reference database (208)
      Identifier (205)
      Mapping processor (306)
      Keyword (209)
      pp; 73 DwgNo 2/17
Title Terms: NATURAL; LANGUAGE; INTERFACE; NATURAL; **QUERY** ; CAPABLE;
  ELECTRONIC; USER; LEARNING; USER; IMPROVE; EFFECT; EFFICIENCY
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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014168810   **Image available**
WPI Acc No: 2001-653038/200175
Related WPI Acc No: 1999-381180
XRPX Acc No: N01-488481
  Search system used in Internet applications, extracts search objective
  database based on stored search log indicating search condition of
  various   databases
Patent Assignee: NEC CORP (NIDE)
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2001273297	A	20011005	JP 97315099	A	19971117	200175	B
			JP 200152728	A	19971117		
JP 3248530	B2	20020121	JP 97315099	A	19971117	200207	
			JP 200152728	A	19971117		

Priority Applications (No Type Date): JP 97315099 A 19971117; JP 200152728
  A 19971117
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2001273297	A		20	G06F-017/30	Div ex application JP 97315099
JP 3248530	B2		19	G06F-017/30	Div ex application JP 97315099
					Previous Publ. patent JP 2001273297

Abstract (Basic): JP 2001273297 A
     NOVELTY - An operation log acquisition **section** (110) stores
  search log indicating search condition of **various   databases** . A
  preference database extraction **section** (130) extracts search
  objective database, and a search device (300) displays the search
  objective database sequentially, based on the search conditions.
     DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
  recording medium.
     USE - For searching database in Internet applications.
     ADVANTAGE - **Searches** suitable database **efficiently** within a
  short time.
     DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
  the search system. (Drawing includes non-English language text).
     Operation log acquisition **section** (110)
     Preference database extraction **section** (130)
     Search device (300)
     pp; 20 DwgNo 1/21
Title Terms: SEARCH; SYSTEM; APPLY; EXTRACT; SEARCH; OBJECTIVE; DATABASE;
  BASED; STORAGE; SEARCH; LOG; INDICATE; SEARCH; CONDITION; VARIOUS
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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014105561   **Image available**
WPI Acc No: 2001-589775/200166
XRPX Acc No: N01-439327
  Database management system in Internet, identifies data item which has
  attributes, values and weights similar with data item input to search
  system
Patent Assignee: HOMEPORTFOLIO INC (HOME-N)
Inventor: BECKER S; ROUSE R
Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200161571	A2	20010823	WO 2001US5471	A	20010220	200166	B
US 20010042060	A1	20011115	US 2000183709	A	20000218	200172	
			US 2001789395	A	20010220		
AU 200141604	A	20010827	AU 200141604	A	20010220	200176	

Priority Applications (No Type Date): US 2000183709 P 20000218; US
   2001789395 A 20010220
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
WO 200161571 A2 E 33 G06F-017/30
    Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
    CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
    KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
    RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
    Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
    IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
US 20010042060 A1   G06F-007/00   Provisional application US 2000183709

AU 200141604 A   G06F-017/30   Based on patent WO 200161571

Abstract (Basic): WO 200161571 A2
        NOVELTY – Data items stored in a **database** (15) has **several**
    associated attributes, which are logically linked to stored values and
    to **weight** for associated attributes. A **search** system (20) when
    input with a data item, identifies another data item which has
    attribute, values and associated **weights** similar with the input data
    items.
        DETAILED DESCRIPTION – An INDEPENDENT CLAIM is also included for
    database management method.
        USE – For **searching** and retrieving data from computer database
    e.g. in Internet.
        ADVANTAGE – Linking data attributes with relevant **weightings**
    increase the precision of **search** results and the usefulness of orders
    in which **search** results are presented.
        DESCRIPTION OF DRAWING(S) – The figure shows the block diagram of
    attribute tagging and matching system of database management system.
        Database (15)
        Search system (20)
        pp; 33 DwgNo 1/13
Title Terms: DATABASE; MANAGEMENT; SYSTEM; IDENTIFY; DATA; ITEM; ATTRIBUTE;
   VALUE; **WEIGHT** ; SIMILAR; DATA; ITEM; INPUT; **SEARCH** ; SYSTEM
Derwent Class: T01
International Patent Class (Main): **G06F-007/00 ; G06F-017/30**
File Segment: EPI

 26/5/28   (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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013980512   **Image available**
WPI Acc No: 2001-464726/200150
XRPX Acc No: N01-344721
   Computing apparatus for collaboratively searching several **knowledge**
   databases **formed by a combination of databases from a global computer**
   network uses a query searcher **for conducting** search queries **of**
   content of knowledge database
Patent Assignee: ZENTECH INC (ZENT-N); ZEN TECH INC (ZENT-N)
Inventor: DELANO P A; DELANO P
Number of Countries: 088 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200109747	A2	20010208	WO 2000US20288	A	20000726	200150	B
AU 200063759	A	20010219	AU 200063759	A	20000726	200150	
US 6430558	B1	20020806	US 99365927	A	19990802	200254	

Priority Applications (No Type Date): US 99365927 A 19990802
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
WO 200109747 A2 E   27 G06F-017/00
    Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
    CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
    LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK
    SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
    Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
    IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
AU 200063759   A   G06F-017/00   Based on patent WO 200109747
US 6430558   B1   G06F-017/30

Abstract (Basic): WO 200109747 A2
        NOVELTY - Apparatus uses **query** **searcher** to conduct (20) **search**
    queries of content of knowledge database. The **search** results
    ranker responds to the **searcher** to provide **ranked** content **search**
    results of the relative closeness of a **requested** **query** inputted by
    a user when conducting a **search** through the use of several
    client-user computer interfaces. Results updater continuously updates
    content **search** results.
        DETAILED DESCRIPTION - Independent claims describe an apparatus and
    a method for collaboratively **searching** knowledge databases and a
    collaborative **searching** engine.
        USE - As an apparatus and method for collaboratively **searching**
    several knowledge **databases** formed b a combination of databases from
    a global computer network.
        ADVANTAGE - Advantageously provides an apparatus and methods for
    collaboratively **searching** knowledge databases such as those provided
    by a global computer network and substantially increases access to
    other related information with the knowledge databases.
        DESCRIPTION OF DRAWING(S) - The drawing shows a scematic block
    diagram of an apparatus for collaboratively **searching** knowledge
    databases.
        the collaborative **search** engine (20)
        pp; 27 DwgNo 1/5
Title Terms: COMPUTATION; APPARATUS; **SEARCH** ; FORMING; COMBINATION; GLOBE;
   COMPUTER; NETWORK; **QUERY** ; **SEARCH** ; CONDUCTING; **SEARCH** ; **QUERY** ;
   CONTENT; DATABASE
Derwent Class: T01
International Patent Class (Main): **G06F-017/00** ; **G06F-017/30**
International Patent Class (Additional): **G06F-007/00**
File Segment: EPI

 26/5/30   (Item 20 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

013838918   **Image available**
WPI Acc No: 2001-323130/200134
XRPX Acc No: N01-232697
   Similar document search **system generates information which is used as
   an index at the time of** searching a database **storing** several
   documents
Patent Assignee: MITSUBISHI ELECTRIC CORP (MITQ)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind   Date   Week
JP 2001084252 A   20010330 JP 99257167   A   19990910 200134 B

Priority Applications (No Type Date): JP 99257167 A 19990910
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 2001084252 A   15 G06F-017/30

Abstract (Basic): JP 2001084252 A
        NOVELTY - An analysis unit analyzes the structure of input **search**
sentence, with reference to a word **dictionary** . An index data
generator generates information used as an index at the time of
searching a **database** storing **several** documents. The document which
is most similar to that of the input **search** sentence, is extracted
from the database.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
        (a) Document;
        (b) **Search** procedure;
        (c) Recording medium
        USE - Similar document- **search** system.
        ADVANTAGE - Enables accurately **searching** the required document
from the database.
        DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
similar document **search** system. (Drawing includes non-English
language text).
        pp; 15 DwgNo 1/20
Title Terms: SIMILAR; DOCUMENT; **SEARCH** ; SYSTEM; GENERATE; INFORMATION;
    INDEX; TIME; **SEARCH** ; DATABASE; STORAGE; DOCUMENT
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

    26/5/36   (Item 26 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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013421343   **Image available**
WPI Acc No: 2000-593282/200056
Related WPI Acc No: 2000-317251
XRPX Acc No: N00-439303
    Internet site searching **and listing system includes server** search
    program to search **site listings database in response to** search
    inquiries by taking into account new denominated bid value entered by
    subscriber
Patent Assignee: SEARCHUP INC (SEAR-N)
Inventor: BUCK B J; MELCHER M
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
US 6078866   A   20000620 US 9890477   A   19980624   200056 B
                              US 98153151   A   19980914

Priority Applications (No Type Date): US 9890477 P 19980624; US 98153151 A
    19980914
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
US 6078866   A   14 G06F-017/30   Provisional application US 9890477

Abstract (Basic): US 6078866 A
        NOVELTY - A server **search** program **searches** a site listings
database with titles of content that match the given **search** inquiry
from a user. The **search** program **searches** the site listings database
in response to **search** inquiries from users by automatically taking
into account the new denominated value bid entered by the subscriber
for subscriber's site listing.
        DETAILED DESCRIPTION - A listing server is connected to the
Internet which is accessible by several users. The site listing
database contains **several** site listings, each of which is provided
by a site listing subscriber. The database includes a title or
description of the content of the respective site, a network address at
which site is accessed on the Internet, and a denominated value bid by
the subscriber for the site listing while it is maintained on the
listing server. The server **search** program **searches** the site

listings database having titles or descriptions of content that match a given **search** inquiry from the user and for ordering the site listings found **search** in order of the denominated values. The listing server provides the **search** report of the denominated-value-ordered site listings relevant to the **search** inquiry to the user in order according to the denominated values bid by the subscribers for the found site listings. A bid management program includes a subscriber account interface for allowing a subscriber to connect online with the listing server and to automatically enter a new denominator value bid for subscriber's site listing into site listings database. An INDEPENDENT CLAIM is also included for Internet site **searching** and listing method.

USE - Internet site **searching** and listing system which is based on **ranking** of site listings based on monetary value.

ADVANTAGE - The subscriber for a web site has the opportunity to determine in competitive monetary terms where their site appears in **search** result. This eliminates the use of arbitrary factors to compute a relevancy **ranking** or a subjective determination of value by the **search** service. The subscriber is allowed for direct control of the site listing. The freedom to make spontaneous modifications to the **search** **rankings** provides the subscriber with more rational and responsive **search** service.

DESCRIPTION OF DRAWING(S) - The figure shows the diagram illustrating denominated value **search** service using credit point total to set the **rankings** of **search** listings.

pp; 14 DwgNo 6/6

Title Terms: SITE; **SEARCH** ; LIST; SYSTEM; SERVE; **SEARCH** ; PROGRAM; **SEARCH** ; SITE; DATABASE; RESPOND; **SEARCH** ; ENQUIRY; ACCOUNT; NEW; BID; VALUE; ENTER; SUBSCRIBER
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

26/5/37   (Item 27 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

013169923   **Image available**
WPI Acc No: 2000-341796/200030
XRPX Acc No: N00-256798
Document search **method for constructing relationships between document databases using** search **results from document database as input for** searching **another database**
Patent Assignee: HITACHI LTD (HITA)
Inventor: IWAYAMA M; NISHIOKA S; NIWA Y; TAKANO A
Number of Countries: 027 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1003111	A1	20000524	EP 99122074	A	19991116	200030	B
JP 2000155758	A	20000606	JP 98328940	A	19981119	200035	
US 20020078030	A1	20020620	US 99442147	A	19991118	200244	
			US 200275283	A	20020215		
US 6584460	B1	20030624	US 99442147	A	19991118	200343	
JP 2003178095	A	20030627	JP 98328940	A	19981119	200351	
			JP 2002269885	A	19981119		

Priority Applications (No Type Date): JP 98328940 A 19981119; JP 2002269885 A 19981119
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1003111	A1	E	9	G06F-017/30	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000155758	A		6		
US 20020078030	A1			G06F-007/00	Cont of application US 99442147
US 6584460	B1			G06F-017/30	

JP 2003178095 A   5 G06F-017/30   Div ex application JP 98328940

Abstract (Basic): EP 1003111 A1
        NOVELTY - The method has a function to change over between **several**
    document **databases** (131,141), and a **function** to **search** a set of
    documents having a high relevance to **search** input from a selected
    document database in the order of higher relevance. The input may be a
    set of keywords, fragments of a document or any desired set of
    documents. The **search** results from the document database (131) can be
    used as input for **searching** another database (141).
        DETAILED DESCRIPTION - Using the **search** module (143), a server
    (14) calculates the relevance of the summary of the set of key
    documents sent from the client to the target document database (141),
    and returns document identifiers of high relevance to a client (11)
    with a relevance **weighting** .
        An INDEPENDENT CLAIM is included for:
        (a) a service for **searching** documents
        USE - In a document **searching** method for changing over between
    several document **databases** , and constructing relationships between
    these document databases.
        ADVANTAGE - Allows a user to specify an arbitrary set of documents
    in an arbitrary document database, and to **efficiently** **search** sets
    of documents relating to this set of documents from within any
    particular database.
        DESCRIPTION OF DRAWING(S) - The drawing shows an example of the
    overall construction of a system implementing **multiple** document
    database **search** method.
        client (11)
        server (14)
        document databases (131,141)
        pp; 9 DwgNo 1/2
Title Terms: DOCUMENT; **SEARCH** ; METHOD; CONSTRUCTION; RELATED; DOCUMENT;
   SEARCH ; RESULT; DOCUMENT; DATABASE; INPUT; **SEARCH** ; DATABASE
Derwent Class: T01
International Patent Class (Main): **G06F-007/00** ; **G06F-017/30**
File Segment: EPI

 26/5/38   (Item 28 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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013145379   **Image available**
WPI Acc No: 2000-317251/200027
Related WPI Acc No: 2000-593282
XRPX Acc No: N00-238156
    Web site searching **and indexing system for Internet, provides** search
    report of listings relevant to search **inquiry in which** rank **is**
    assigned in order according to denominated values associated with
    listings
Patent Assignee: SEARCHUP INC (SEAR-N); GOTO.COM INC (GOTO-N)
Inventor: BUCK B J; MELCHER M J
Number of Countries: 022 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200016218	A1	20000323	WO 99US20486	A	19990910	200027	B
AU 9961380	A	20000403	AU 9961380	A	19990910	200034	
EP 1121651	A1	20010808	EP 99948145	A	19990910	200146	
			WO 99US20486	A	19990910		

Priority Applications (No Type Date): US 98153151 A 19980914
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200016218	A1	E	26	G06F-017/30	

    Designated States (National): AU CA JP
    Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU
  MC NL PT SE

AU 9961380   A   G06F-017/30   Based on patent WO 200016218
EP 1121651   A1 E   G06F-017/30   Based on patent WO 200016218
    Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
    LU MC NL PT SE

Abstract (Basic): WO 200016218 A1
     NOVELTY - A listing server connected to a network accessible by
several users, provides **search** report of listings relevant to the
search inquiry from user. The listings are assigned a **rank** in order,
according to the denominated values associated with the listings. The
denominated value is subscription fee of initially entered amount that
may be adjusted during defined adjustment period.
     DETAILED DESCRIPTION - A listing server connected to network
accessible by several users, has **several** site listings **databases** .
Each database provided by site listing subscriber, has title or
description of content of the respective site, network address at which
the site can be accessed by the network and denominated value to be
paid by the subscriber associated with site listing. The server has
account interface that allows subscriber to enter information to set
subscription fee for respective listing in order to obtain desired
rank for listing. The server has **search** unit that conducts category
or index **search** of the site listings database based upon selected
category or keywords provided with **search** inquiry from user. An
INDEPENDENT CLAIM is also included for method of web site **searching**
and listing.
     USE - For **searching** web site in Internet based on monetary
ranking .
     ADVANTAGE - The web site owners can determine for themselves the
rankings that their information or services should receive in
competition with others and not through computation of **ranking** based
on arbitrary factors or subjective determination by **search** service.
Also the web site owners are able to readily upgrade or downgrade their
 rankings based upon their assessment of market factors on on-going
basis, using the indexing and **searching** system. The system can be
readily implemented at manageable cost and readily understood by users
without having to accept a new **search** orthodoxy or unfamiliar change
of **search** usage.
     DESCRIPTION OF DRAWING(S) - The figure shows user interface used
with denominated value **search** service.
     pp; 26 DwgNo 6/6
Title Terms: WEB; SITE; **SEARCH** ; INDEX; SYSTEM; **SEARCH** ; REPORT; RELEVANT
 ; **SEARCH** ; ENQUIRY; **RANK** ; ASSIGN; ORDER; ACCORD; VALUE; ASSOCIATE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/39   (Item 29 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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013106264   **Image available**
WPI Acc No: 2000-278135/200024
XRPX Acc No: N00-209478
  Image search **method for personal computer, involves accessing** various
  image database **based on respective converted** search **conditions, using**
  common keyword
Patent Assignee: NIPPON TELEGRAPH & TELEPHONE CORP (NITE)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 2000076287 A   20000314 JP 98246389   A   1998083 200024 B

Priority Applications (No Type Date): JP 98246389 A 19980831
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 2000076287 A   18 G06F-017/30

Abstract (Basic): JP 2000076287 A
    NOVELTY - The **weighting** of characteristic vector classification
of image which is **search** object, is performed based on keyword for
image **search** . The conversion of **search** conditions is performed to
access the image data. Image database is accessed based on the
converted **search** condition. **Several** such image **database** are
searched using respective **search** conditions and a common keyword.
    DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
        (a) image **search** apparatus;
        (b) image **search** program
    USE - For personal computer.
    ADVANTAGE - Image **search** is performed in image database with
different **search** conditions with a common keyword, therefore
difference of **search** conditions in each database management system is
eliminated.
    DESCRIPTION OF DRAWING(S) - The figure shows the flow chart of
image **search** method.
    pp; 18 DwgNo 2/9
Title Terms: IMAGE; **SEARCH** ; METHOD; PERSON; COMPUTER; ACCESS; VARIOUS;
  IMAGE; DATABASE; BASED; RESPECTIVE; CONVERT; **SEARCH** ; CONDITION; COMMON;
  KEYWORD
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/40   (Item 30 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012832445   **Image available**
WPI Acc No: 2000-004277/200001
XRPX Acc No: N00-003723
    Internet document search **apparatus - has** several database
  **management system to distribute universal resource locator information of
  document on internet**
Patent Assignee: NEC CORP (NIDE)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind Date   Week
JP 11282870   A   19991015 JP 9887035   A   19980331 200001 B

Priority Applications (No Type Date): JP 9887035 A 19980331
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 11282870 A   14 G06F-017/30

Abstract (Basic): JP 11282870 A
    NOVELTY - A **search** robot (10a) collects the data from document
and registers it on **several** **database** management systems (DBMS)
model (10h). The DBMS distributes the universal resource locator (URL)
information of the document on internet to the list of ordered
vocabulary in the document collected by **search** robot without
overlapping. DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also
included for control method of internet document **search** apparatus.
    USE - For **searching** document in internet.
    ADVANTAGE - Since the system implements by the coordination between
several DBMS, the access frequency is reduced. The URL information is
arranged in order automatically and can be accessed depending on a
content line. DESCRIPTION OF DRAWING(S) - The figure shows the block
diagram of internet **search** apparatus. (10a) **Search** robot; (10h)
DBMS model.
    Dwg.1/7
Title Terms: DOCUMENT; **SEARCH** ; APPARATUS; DATABASE; MANAGEMENT; SYSTEM;
  DISTRIBUTE; UNIVERSAL; RESOURCE; LOCATE; INFORMATION; DOCUMENT

 26/5/41   (Item 31 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012827274   **Image available**
WPI Acc No: 1999-633506/199954
Related WPI Acc No: 2003-066361
XRPX Acc No: N99-467801
  Database evaluation system for helping consumers and business users to
  find required items in database of computers
Patent Assignee: BIZRATECOM (BIZR-N)
Inventor: SCHMITT M
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
US 5983220   A   19991109 US 956812   P   19951115 199954 B
                             US 96748944   A   19961114

Priority Applications (No Type Date): US 956812 P 19951115; US 96748944 A
  19961114
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
US 5983220   A   54 G06F-017/30   Provisional application US 956812

Abstract (Basic): US 5983220 A
       NOVELTY - A proximity **searcher** user interface is coupled to
  evaluation engine for displaying reference item from the database
  (2.4). The **searcher** user interface also displays nearest neighbor
  item for attribute as a function of distance between reference item and
  nearest neighbor item, for at least one attribute of domain model
  (2.10).
       DETAILED DESCRIPTION - An evaluation engine couples domain model to
  the database, and provides a user interface (2.16) for allowing user to
  iteratively set criterion for selecting and displaying a set of
  matching items comprising a short list. The evaluation engine allows
  user to inspect, compare or navigate the items on short list. A scoring
  interface displays relative score of each item from short list. A
  direct manipulator performs **weighting** of relative **weight** of
  attribute of item. The evaluation engine redetermines relative score of
  each item in short list according to any change in relative **weighting**
  of attributes.
       USE - For helping consumers and business users to find items in
  computer database that most closely matches their objective
  requirements and subjective preferences in network environment.
       ADVANTAGE - Supports analysis and evaluation of similarity of items
  in database with respect to **multiple** criteria, hence **database** of
  information rich items can be turned into an interactive buyer's guide.
       DESCRIPTION OF DRAWING(S) - The figure shows software component of
  database evaluation system.
       Database (2.4)
       Domain model (2.10)
       User interface (2.16)
       pp; 54 DwgNo 2/26
Title Terms: DATABASE; EVALUATE; SYSTEM; HELP; CONSUME; BUSINESS; USER;
  FINDER; REQUIRE; ITEM; DATABASE; COMPUTER
Derwent Class: T01
International Patent Class (Main): G06F-017/30
File Segment: EPI

 26/5/42   (Item 32 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012769707   **Image available**
WPI Acc No: 1999-575930/199949
XRPX Acc No: N99-425089
  Data mining apparatus for extracting correlation rule within relationship
  database - includes procedure file with series of procedure for
  converting relationship database into item database, after which
  correlation rule between items of database is extracted and
Patent Assignee: MITSUBISHI ELECTRIC CORP (MITQ)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 11250084	A	19990917	JP 9849739	A	19980302	199949	B

Priority Applications (No Type Date): JP 9849739 A 19980302
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11250084	A		16	G06F-017/30	

Abstract (Basic): JP 11250084 A
      NOVELTY - Procedure file (312) records procedure for converting
  relational database into item database. A mining executing unit
  extracts correlation rule between items of database and outputs it as
  sequence rule file which is displayed. Procedure file edit unit
  processes attribute value of database, in order. DETAILED DESCRIPTION -
  Procedure edit unit performs Procedures such as digitization, grouping,
  displacing non- attribute value, deleting attributes, selecting
  records, itemization, amendments, deletion and modification etc.
  Procedure file application setting unit arranges one or more procedure
  file in order, used by preprocessing executing **section** (302). ·
    USE - For extracting correlation rule within relationship database.
    ADVANTAGE - Since content of procedure file is changed and applied
  to relational **database** , **several** preprocessing praxis can be easily
  repeated. Since hierarchical structure obtained can be displayed by
  effecting conversion based on content of interval data **dictionary** ,
  structure of data obtained by relationship database with application of
  procedure file can be understood with ease. DESCRIPTION OF DRAWING(S) -
  The figure shows detailed block diagram of data mining apparatus. (302)
  Preprocessing executing **section** ; (312) Procedure file.
      Dwg.3/24
Title Terms: DATA; MINE; APPARATUS; EXTRACT; CORRELATE; RULE; RELATED;
  DATABASE; PROCEDURE; FILE; SERIES; PROCEDURE; CONVERT; RELATED; DATABASE;
  ITEM; DATABASE; AFTER; CORRELATE; RULE; ITEM; DATABASE; EXTRACT
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/43   (Item 33 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012597956   **Image available**
WPI Acc No: 1999-404062/199934
XRPX Acc No: N99-301100
  Concurrent control method for multi server database system, B-trees
Patent Assignee: RISHE N (RISH-I)
Inventor: RISHE N D; SHAPOSHNIKOV A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5920857	A	19990706	US 97905679	A	19970804	199934	B

Priority Applications (No Type Date): US 97905679 A 19970804
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes

US 5920857   A   8   G06F-017/30

Abstract (Basic): US 5920857 A
        NOVELTY - Transactions (T) are **split** into sub-transactions (Tn)
    at transaction originator server and are executed using a two phase
    commit protocol. Logs of committed sub-transactions (CL) and
    sub-transactions (WL) ready to commit are maintained and verified at
    each server for each incoming transaction (Tn).
        DETAILED DESCRIPTION - During transaction execution at the server,
    a logical time is incremented at each server machine. A transaction
    T(L,D,V) is accumulated at client in three sets with an insert set (I),
    delete set (D) and a verify set (V) comprising set of data items to be
    inserted, deleted and set of descriptions (P) which contains
    information that identifies data retrieval operations performed by the
    client with respect to server, the particular server subjected to the
    client data retrieval operations and a logical time stamp at the
    particular server. A transaction (T) is delivered from a client to the
    selected server which is being designated as the transaction originator
    server. An INDEPENDENT CLAIM is also included for **query   optimization**
    method.
        USE - For multi server **database** system comprising **multiple**
    client and multiple server and for B-tree.
        ADVANTAGE - The computational load to the server is reduced and a
    fine granularity is implemented which improves the overall server
    performance. The use of synchronized physical clocks is eliminated by
    using logical clocks.
        DESCRIPTION OF DRAWING(S) - The figure shows the work of an
    optimistic concurrency control algorithm with logical time stamps.
        pp; 8 DwgNo 2/2
Title Terms: CONCURRENT; CONTROL; METHOD; MULTI; SERVE; DATABASE; SYSTEM;
   TREE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

   26/5/44   (Item 34 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012492182   **Image available**
WPI Acc No: 1999-298290/199925
XRPX Acc No: N99-224488
   Automatic text data display procedure of search **inquiry related text in
   computer network - involves displaying text related to** search **inquiry
   automatically, after extracting them from database selected based on**
   search **inquiry**
Patent Assignee: CLARITECH CORP (CLAR-N)
Inventor: EVANS D A; MCINERNY M J
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 11102376	A	19990413	JP 98110879	A	19980421	199925	B
US 5926808	A	19990720	US 97900639	A	19970725	199935	

Priority Applications (No Type Date): US 97900639 A 19970725
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11102376	A		10	G06F-017/30	
US 5926808	A			G06F-017/30	

Abstract (Basic): JP 11102376 A
        NOVELTY - A **search** inquiry is designated. Then, **several
    databases** related to **search** inquiry is chosen automatically after
    which at least one of the database is specified from among the selected
    ones. The document returned from these databases based on the order of
    relationship to **search** inquiry or in the order of **ranking** , is
    systemized, extracted and displayed automatically to user. DETAILED

DESCRIPTION - An INDEPENDENT CLAIM is included for the automatic text data display apparatus.
   USE - In computer network.
   ADVANTAGE - Displays extracted text automatically from **several databases** which is related to a **search** inquiry. DESCRIPTION OF DRAWING(S) - The figure shows the schematic block diagram which explains automatic display of text related to **search** inquiry.
   Dwg.1/6
Title Terms: AUTOMATIC; TEXT; DATA; DISPLAY; PROCEDURE; **SEARCH** ; ENQUIRY; RELATED; TEXT; COMPUTER; NETWORK; DISPLAY; TEXT; RELATED; **SEARCH** ; ENQUIRY; AUTOMATIC; AFTER; EXTRACT; DATABASE; SELECT; BASED; **SEARCH** ; ENQUIRY
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/45   (Item 35 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012438022   **Image available**
WPI Acc No: 1999-244130/199920
Related WPI Acc No: 1999-045091
XRPX Acc No: N99-181663
   collection selection relative to a set of databases to obtain consistent relative- ranking collection selection results each iteration
Patent Assignee: INFOSEEK CORP (INFO-N)
Inventor: CHANG W I; KIRSCH S T
Number of Countries: 081 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9914691	A1	19990325	WO 98US18844	A	19980910	199920	B
AU 9892282	A	19990405	AU 9892282	A	19980910	199933	
US 5983216	A	19991109	US 97928294	A	19970912	199954	
US 6018733	A	20000125	US 97928543	A	19970912	200012	

Priority Applications (No Type Date): US 97928543 A 19970912; US 97928294 A 19970912; US 97928542 A 19970912
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9914691	A1	E	46	G06F-017/30	

   Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

AU 9892282	A			G06F-017/30	Based on patent WO 9914691
US 6018733	A			G06F-017/30	
US 5983216	A			G06F-017/30	

Abstract (Basic): WO 9914691 A1
   NOVELTY - A collection selection **query** including a set of set **search** terms is obtained. An inverse collection frequency is determined for each **search** term with respect to each database and the set of databases. A document frequency is determined for each **search** term with respect to each database. A **ranking** value is determined for each database based on a sum of the products of the inverse collection frequencies for the **search** terms and the document frequencies for respective **search** terms. A subset of the set of databases is selected based on set criteria dependent on the **ranking** value for each database.
   DETAILED DESCRIPTION - The method involves: a) obtaining a collection selection **query** including a set of set **search** terms, b) determining an inverse collection frequency for each **search** term with respect to each database and the set of databases, and determining a

document frequency for each **search** term with respect to each
database, c) determining a **ranking** value for each database based on a
sum of the products of the inverse collection frequencies for the
search terms and the document frequencies for respective **search**
terms, d) selecting a subset of the set of databases based on set
criteria dependent on the **ranking** value for each database, and e)
selectively repeating portions of the steps (b) through (d) with
respect to each **search** term for each iteration of the method.
 USE - The method is used to permit iterative performance of
collection selection relative to a set of databases, where each
database includes **several** documents, to obtain consistent relative-
ranking collection selection results each iteration.
 ADVANTAGE - Improves selection of most relevant collections for
searching based on an ad hoc **query** .
 DESCRIPTION OF DRAWING(S) - The drawing shows a flow diagram
illustrating the operation in supporting a meta-index database
construction and user **search** .
 pp; 46 DwgNo 1/6
Title Terms: COLLECT; SELECT; RELATIVE; SET; OBTAIN; CONSISTENT; RELATIVE;
 RANK ; COLLECT; SELECT; RESULT; ITERATIVE
Derwent Class: T01; W01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/46 (Item 36 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012413601 **Image available**
WPI Acc No: 1999-219709/199919
XRPX Acc No: N99-162547
 Search **method of** multiple databases **connected to network and
developed independently - involves** searching **database which stores
selected table, by producing data item and** search **conditions consisting
of conditional expression of value**
Patent Assignee: NIPPON TELEGRAPH & TELEPHONE CORP (NITE)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 11053383	A	19990226	JP 97208871	A	19970804	199919	B

Priority Applications (No Type Date): JP 97208871 A 19970804
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11053383	A		9	G06F-017/30	

Abstract (Basic): JP 11053383 A
 NOVELTY - The detected data item, the data item containing the
value which coincides to the **search** conditions within the candidate
of a table, and a table are chosen. The database which stores the
selected table is **searched** by producing the data item and the **search**
conditions consisting of conditional expression of value. DETAILED
DESCRIPTION - Using a **dictionary** consisting of the correspondence
relation of the expression conversion of the data item of **search**
conditions and the data item of a database, the conditions of a table
and data item, and the range conditions of data item of a database, the
expression of the data item of the designated **search** conditions is
converted to the expression of the data item of a database. The
candidate of the data item of the database for **search** and a table is
detected from the data item to which the conversion of **search**
conditions is performed. An INDEPENDENT CLAIM is also included for a
search program recording medium.
 USE - For **searching** databases connected to network and developed
independently.
 ADVANTAGE - Avoids wasteful **search** of database without value
corresponding to concrete value of **search** conditions, since data item

and table relevant to data item of **search** conditions can be **searched** from **multiple** **databases** . Raises possibility of **search** of data item since data item name of designated **search** conditions can be made to correspond to data item name of in a related database. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of a **search** apparatus.
        Dwg.1/9
Title Terms: **SEARCH** ; METHOD; MULTIPLE; CONNECT; NETWORK; DEVELOP; .
   INDEPENDENT; **SEARCH** ; DATABASE; STORAGE; SELECT; TABLE; PRODUCE; DATA;
   ITEM; **SEARCH** ; CONDITION; CONSIST; CONDITION; EXPRESS; VALUE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
International Patent Class (Additional): **G06F-012/00**
File Segment: EPI

 26/5/47   (Item 37 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012408291   **Image available**
WPI Acc No: 1999-214399/199918
XRPX Acc No: N99-157802
   SQL queries optimization **method in relation database management system**
Patent Assignee: NCR CORP (NATC)
Inventor: KRAUS T B; RAMESH B; WALTER T A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5884299	A	19990316	US 97795114	A	19970206	199918	B

Priority Applications (No Type Date): US 97795114 A 19970206
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5884299	A		11	G06F-017/30	

Abstract (Basic): US 5884299 A
       NOVELTY - The query is examined to determine if it includes one or more aggregation operating on rows of a table in relational **database** . **Several** local aggregate result rows are created by aggregating rows of table by aggregation operation. The aggregation result rows are redistributed to several global aggregation operations to create several global aggregate result rows.
       DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for **query** **optimizing** apparatus.
       USE - For **optimizing** SQL **queries** in relation database management system using aggregate or grouping function. In MPP computer . system.
       ADVANTAGE - The queries are **splitted** into sub-queries by a single processor in order to minimize the overhead associated with the processing of the entire query. The sub-queries are performed simultaneously on a single processor using a multitasking operating environment.
       DESCRIPTION OF DRAWING(S) - The figure represents flow chart for the execution of the global aggregation in SQL **queries** **optimization** method.
       pp; 11 DwgNo 5/5
Title Terms: SQL; QUERY; METHOD; RELATED; DATABASE; MANAGEMENT; SYSTEM
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/49   (Item 39 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

012280386   **Image available**
WPI Acc No: 1999-086492/199908
XRPX Acc No: N99-062886
  **Keyword processing method for electronic documentation - involves
  selecting extracted keywords existing in less number of documents, as
  search keywords, which are then coupled by logical expression, for
  searching document in database**
Patent Assignee: NTT DATA TSUSHIN KK (NITE)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10320403	A	19981204	JP 97124562	A	19970514	199908	B

Priority Applications (No Type Date): JP 97124562 A 19970514
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10320403	A		8	G06F-017/30	

Abstract (Basic): JP 10320403 A
      The method involves performing morphological analysis of designated
  document groups stored in a **database** , for extracting **several**
  keywords. The number of documents, in which each extracted keyword
  exists, is detected, with reference to a keyword document frequency
  dictionary (12).
      The keywords which exist in less number of documents are selected
  as **search** keywords. The selected **search** keywords are coupled by
  logical expression, for **searching** the document in the database.
      ADVANTAGE - Improves document **searching** efficiency, greatly.
      Dwg.1/5
Title Terms: KEYWORD; PROCESS; METHOD; ELECTRONIC; DOCUMENT; SELECT;
  EXTRACT; KEYWORD; EXIST; LESS; NUMBER; DOCUMENT; **SEARCH** ; KEYWORD;
  COUPLE; LOGIC; EXPRESS; **SEARCH** ; DOCUMENT; DATABASE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/50   **(Item 40 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

012244534   **Image available**
WPI Acc No: 1999-050641/199905
XRPX Acc No: N99-037508
  SQL database access method - involves associating and searching **data of**
  several databases **, when relation of data item in table is detected to**
  be effective
Patent Assignee: NIPPON TELEGRAPH & TELEPHONE CORP (NITE)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10301821	A	19981113	JP 97109356	A	19970425	199905	B

Priority Applications (No Type Date): JP 97109356 A 19970425
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10301821	A		7	G06F-012/00	

Abstract (Basic): JP 10301821 A
      The method involves registering the type and range of the value of
  a data item into a **dictionary** . Then, the relation of the data item in
  a table is detected by using the **dictionary** . When the detected
  relation is found to be effective, the data of **several databases**
  are associated and **searched** by using the detected relation.
      ADVANTAGE - **Searches** data between **several databases** , simply.
      Dwg.1/7

Title Terms: SQL; DATABASE; ACCESS; METHOD; ASSOCIATE; **SEARCH** ; DATA;
   RELATED; DATA; ITEM; TABLE; DETECT; EFFECT
Derwent Class: T01
International Patent Class (Main): **G06F-012/00**
International Patent Class (Additional): **G06F-017/30**
File Segment: EPI

 26/5/51   (Item 41 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012099727   **Image available**
WPI Acc No: 1998-516638/199844
XRPX Acc No: N98-403974
   Similar vector data search **apparatus - calculates** weight **factor based
   on vector data designated by correct answer selector when displayed**
   searched **similar vector data is judged to be incorrect**
Patent Assignee: MITSUBISHI ELECTRIC CORP (MITQ)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind   Date   Week
JP 10228475   A   19980825 JP 9729400   A   19970213 199844 B

Priority Applications (No Type Date): JP 9729400 A 19970213
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 10228475   A ·   16 G06F-017/30

Abstract (Basic): JP 10228475 A
      The apparatus includes an object data addressing unit that
   designates vector data for similar vector data **searching** . A vector
   database stores **several** vector data. A similar vector data
   searching data unit (3) **searches** similar vector data within **several**
   vector **data** **based** on the **weight** factor.
      A display unit displays the **searched** similar vector data. Based
   on the operation of the user it is judged whether the displayed
   searched similar vector data are correct data or incorrect data. A
   three vector **weight** reabsorption unit (8) calculates the **weight**
   factor based on the vector data designated by a correct answer selector
   (7) when the displayed **searched** similar vector data is judged to be
   incorrect.
      ADVANTAGE - Prevents deterioration in **searching** accuracy. Does
   not revise **weight** factor when displayed **searched** similar vector is
   incorrect. Facilitates to setup new **weight** vector.
      Dwg.1/21
Title Terms: SIMILAR; VECTOR; DATA; **SEARCH** ; APPARATUS; CALCULATE; ·**WEIGHT** ·
   ; FACTOR; BASED; VECTOR; DATA; DESIGNATED; CORRECT; ANSWER; SELECT;
   DISPLAY; **SEARCH** ; SIMILAR; VECTOR; DATA; JUDGEMENT; INCORRECT
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/52   (Item 42 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011950592   **Image available**
WPI Acc No: 1998-367502/199832
XRPX Acc No: N98-287479
   Database management system e.g. for computer - has search **unit that**
   searches **, according to set** search   ranking **on database**
Patent Assignee: KUBOTA CORP (KUBI)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind   Date   Week ·

JP 10143516   A   19980529 JP 96296927   A   19961108   199832   B

Priority Applications (No Type Date): JP 96296927 A 19961108
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 10143516   A   9 G06F-017/30

Abstract (Basic): JP 10143516 A
        The system has a setting unit which sets the **search** **ranking** for
    several classification items of different attributes. A **search** unit
    searches a database (13) according to set up **ranking** . The **database**
    consisting of **several** datagroups comprising attributes with one or
    more classification items, is **searched** based on set **ranking** .
        ADVANTAGE - Reduces **search** time and burden on computer.
        Dwg.1/7
Title Terms: DATABASE; MANAGEMENT; SYSTEM; COMPUTER; **SEARCH** ; UNIT;
    SEARCH ; ACCORD; SET; **SEARCH** ; **RANK** ; DATABASE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

   26/5/53   (Item 43 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011864981   **Image available**
WPI Acc No: 1998-281891/199825
XRPX Acc No: N98-222426
    Machine assisted translation system - analyses outputs of search **and**
    substitution units and produces that output with higher degree of
    correspondence with input sentence as final translation result
Patent Assignee: SHARP KK (SHAF)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind   Date   Week
JP 10097538   A   19980414 JP 96252122   A   19960925   199825 B

Priority Applications (No Type Date): JP 96252122 A 19960925
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 10097538   A   18 G06F-017/28

Abstract (Basic): JP 10097538 A
        The system includes a bilingual **database** which stores **various**
    sentences in one language and their equivalent in the other language.
    An implicative **dictionary** which stores the implication of various
    notations used in one language, and a variable implication **dictionary**
    which stores other possible implications of the notation are also
    included. A sentence to be translated is input through an input unit.
        The bilingual database and the two **dictionaries** are **searched**
    for translating the input sentence, by a **search** unit. A substition
    unit provides an alternate translation result as a substitute. The
    outputs of the **search** and substition units are analysed and the
    degree of correspondence with the input sentence is obtained. The input
    that has a higher degree of correspondence is produced as the final
    output.
        ADVANTAGE - Produces translated sentences with almost correct
    semantics reliably.
        Dwg.3/21
Title Terms: MACHINE; ASSIST; TRANSLATION; SYSTEM; ANALYSE; OUTPUT; **SEARCH**
    ; SUBSTITUTE; UNIT; PRODUCE; OUTPUT; HIGH; DEGREE; CORRESPOND; INPUT;
    SENTENCE; FINAL; TRANSLATION; RESULT
Derwent Class: T01
International Patent Class (Main): **G06F-017/28**
File Segment: EPI

011809548   **Image available**
WPI Acc No: 1998-226458/199820
XRPX Acc No: N98-179942
  Data search parallel database search method for RDBMS - involves
  extracting sub data from database operation server in response to
  enquiry, based on positional information of data, dictionary
  information relevant to sub data and identifier of registered sub data
Patent Assignee: HITACHI LTD (HITA   ); HARA N (HARA-I); IWATA M (IWAT-I);
  NAKANO Y (NAKA-I); TSUCHIDA M (TSUC-I)
Inventor: HARA N; IWATA M; NAKANO Y; TSUCHIDA M
Number of Countries: 002 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10069488	A	19980310	JP 96226406	A	19960828	199820	B
US 5940289	A	19990817	US 97918106	A	19970827	199939	
US 20020038300	A1	20020328	US 97918106	A	19970827	200225	
			US 99369327	A	19990806		
			US 2001998219	A	20011203		
US 6564205	B2	20030513	US 97918106	A	19970827	200335	
			US 99369327	A	19990806		
			US 2001998219	A	20011203		

Priority Applications (No Type Date): JP 96226406 A 19960828
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10069488	A		20	G06F-017/30	
US 5940289	A			G05B-015/00	
US 20020038300	A1			G06F-017/30	Cont of application US 97918106
					Cont of application US 99369327
					Cont of patent US 5940289
US 6564205	B2			G06F-017/30	Cont of application US 97918106
					Cont of application US 99369327
					Cont of patent US 5940289

Abstract (Basic): JP 10069488 A
     The method involves using multiple database operation servers
  (13) connected to a network. A front end server (12) analyses the
  enquiry from a database. The database operation server performs data
  search out operation, and outputs the positional information of data
  consisting of sub data to the front end server, as search result.
     The front end server performs processing and control of search
  result. Each sub data is extracted from the database operation server
  in response to a next enquiry, using the positional information,
  dictionary information relevant to the position of sub data and
  identifier of registered sub data.
     ADVANTAGE - Enables reduction of enquiry time and communication
  time by forwarding only data required for next process.
     Dwg.1/23
Title Terms: DATA; SEARCH ; PARALLEL; DATABASE; SEARCH ; METHOD; EXTRACT;
  SUB; DATA; DATABASE; OPERATE; SERVE; RESPOND; ENQUIRY; BASED; POSITION;
  INFORMATION; DATA; DICTIONARY ; INFORMATION; RELEVANT; SUB; DATA;
  IDENTIFY; REGISTER; SUB; DATA
Derwent Class: T01
International Patent Class (Main): G05B-015/00; G06F-017/30
International Patent Class (Additional): G06F-012/00
File Segment: EPI

011703352   **Image available**
WPI Acc No: 1998-120262/199811
XRPX Acc No: N98-095715
   Multiple **aggregation level** database   query **result generation method**
   - involves receiving query   request **specifying** ranked **aggregation**
   levels specifying grouping fields and producing result table of all
   source table records specified by aggregation level and selecting
   specific value
Patent Assignee: MICROSOFT CORP (MICR-N)
Inventor: BELLEW M; BOSWORTH A; BRANDLI S A; HECHT S C; REITER A
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind Date   Week
US 5713020   A   19980127 US 93116826   A   19930902 199811 B

Priority Applications (No Type Date): US 93116826 A 19930902
Patent Details:
Patent No Kind Lan Pg Main IPC   Filing Notes
US 5713020 A   26 G06F-017/30

Abstract (Basic): US 5713020 A
      The **query** generation method involves receiving a **query   request**
   specifying numerous **ranked** aggregation levels specifying grouping
   fields. For a superior aggregation level a result table is produced
   with an aggregation level from all records of a source table specified
   by the grouping field specified by the aggregation level. A distinct
   value is selected. For each aggregation level inferior to at least one
   other level a result table is produced with an aggregation level from
   all records of a source table having a selected value of a grouping
   field specified by the superior aggregation level and inferior to the
   largest number of other aggregation levels. A distinct value of the
   grouping field is selected from this table.
      A different distinct value of the grouping field is selected
   specified by one of the aggregation levels. For each aggregation level
   inferior to the aggregation level for which a different distinct value
   of the grouping field is selected the existing result table for the
   aggregation level with result table is replaced from all records of the
   source table with values of grouping field specified by aggregation
   level superior to aggregation level and inferior to largest number of
   other aggregation levels. A distinct value of the grouping field
   specified by the aggregation level occuring in a record of the source
   table having the selected value of the grouping field specified by the
   aggregation level superior to the aggregation level and inferior to the
   largest number of other aggregation levels.
      USE - Generates and displays multiple-level and cross-tab
   aggregation **query** results. Provides application programming interface
   for multi-level and cross-tab **queries** .
      Dwg.17/18
Title Terms: MULTIPLE; AGGREGATE; LEVEL; DATABASE; **QUERY** ; RESULT;
   GENERATE; METHOD; RECEIVE; **QUERY** ; **REQUEST** ; SPECIFIED; **RANK** ;
   AGGREGATE; LEVEL; SPECIFIED; GROUP; FIELD; PRODUCE; RESULT; TABLE; SOURCE
   ; TABLE; RECORD; SPECIFIED; AGGREGATE; LEVEL; SELECT; SPECIFIC; VALUE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/56   (Item 46 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011675073   **Image available**
WPI Acc No: 1998-091982/199809
XRPX Acc No: N98-073215
   Translator with dictionary   searching   function   **- has temporary data**
   memory that stores data output by both translation processing unit and
   dictionary - searching **processor, and output display unit that displays**

output data
Patent Assignee: SHARP KK (SHAF)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 9319751	A	19971212	JP 96134846	A	19960529	199809	B

Priority Applications (No Type Date): JP 96134846 A 19960529
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9319751	A		14	G06F-017/28	

Abstract (Basic): JP 9319751 A

The translator has an input designating unit (1) that inputs a sentence described in a particular language. A translation **dictionary** (3) stores the e.g. word **dictionary** used for translation, grammar **dictionary** , syntax rule. The input sentence is translated into another language by a translation processing unit (2).

During the translation process, a **dictionary** - **searching** processor (6) **searches** a word **dictionary** database (7) for data relating to the **dictionary** data of the input sentence. The output data from the translation processing unit and **dictionary** - **searching** processor are stored into a temporary data memory (8) and displayed on an output display unit (5).

ADVANTAGE - Simplifies interrogative dissolution of translation result via machine translation. Enables desired data to be obtained effectively from **several dictionary databases** since only required grammar analysis result is displayed, hence minimising unsuitable translation results.

Dwg.1/21

Title Terms: TRANSLATION; **DICTIONARY** ; **SEARCH** ; FUNCTION; TEMPORARY; DATA ; MEMORY; STORAGE; DATA; OUTPUT; TRANSLATION; PROCESS; UNIT; **DICTIONARY** ; **SEARCH** ; PROCESSOR; OUTPUT; DISPLAY; UNIT; DISPLAY; OUTPUT; DATA

Derwent Class: T01
International Patent Class (Main): **G06F-017/28**
File Segment: EPI

26/5/58   (Item 48 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011446630   **Image available**
WPI Acc No: 1997-424537/199739
XRPX Acc No: N97-353694

Document search **and retrieve method using** several database **over computer network - involves applying** search query **from client to each server associated with each database, at each server list of relevant documents is determined**

Patent Assignee: INFOSEEK CORP (INFO-N)
Inventor: KIRSCH S T
Number of Countries: 006 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5659732	A	19970819	US 95443348	A	19950517	199739	B
GB 2314178	A	19971217	GB 9612261	A	19960612	199802	N
DE 19624696	A1	19980102	DE 1024696	A	19960620	199806	N
FR 2750519	A1	19980102	FR 968174	A	19960701	199809	N
JP 10021250	A	19980123	JP 96154370	A	19960614	199814	N
CA 2178788	A	19971212	CA 2178788	A	19960611	199824	N
DE 19624696	C2	19990701	DE 1024696	A	19960620	199930	N
GB 2314178	B	20001227	GB 9612261	A	19960612	200102	N

Priority Applications (No Type Date): US 95443348 A 19950517; GB 9612261 A 19960612; DE 1024696 A 19960620; FR 968174 A 19960701; JP 96154370 A 19960614; CA 2178788 A 19960611
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes

Abstract (Basic): US 5659732 A
    The method involves applying a **search** **query** from the client to
each server associated with each database, at each server a list of
relevant documents is determined. Statistics about each database are
obtained, at the client from each server. Information about the
relevant documents resulting from application of the **query** to the
associated database is obtained at the client from each server. A
relevance score for each document is computed at the client, using the
statistics and the information whereby the computed relevance score is
used in determining how the relevant documents from all of the
databases should be ordered in a list of merged relevant documents.
    ADVANTAGE - Capable of **searching** multiple collections on single
pass with **ranking** of documents.
    Dwg.1/1
Title Terms: DOCUMENT; **SEARCH** ; RETRIEVAL; METHOD; DATABASE; COMPUTER;
  NETWORK; APPLY; **SEARCH** ; **QUERY** ; CLIENT; SERVE; ASSOCIATE; DATABASE;
  SERVE; LIST; RELEVANT; DOCUMENT; DETERMINE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
International Patent Class (Additional): **G06F-007/06** ; **H04L-012/28**
File Segment: EPI

 26/5/59   (Item 49 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011319758   **Image available**
WPI Acc No: 1997-297662/199727
XRPX Acc No: N97-246013
    FIM system for integrating data from multiple **interconnected local**
    databases **to provide users with access to virtual database - has user**
    interface for generating global query to search **virtual database, DIM**
    that decomposes global query **into local** queries **, and number of LIMs**
    that execute local queries **to** search **enumerated databases**
Patent Assignee: HUGHES AIRCRAFT CO (HUGA)
Inventor: NOBLE W B; PATEL B K; WANG J K
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5634053	A	19970527	US 95521340	A	19950829	199727	B

Priority Applications (No Type Date): US 95521340 A 19950829
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5634053	A		21	G06F-017/30	

Abstract (Basic): US 5634053 A
    The database controller comprises the user interface for generating
a global **query** to **search** the virtual data base, which has an
associated global format, the global **query** including at least one
data field from a set of commonly used data fields whose values are
represented in an input format. A smart data **dictionary** (SDD)
contains configuration data for each of the local databases including
respective local formats for each of the commonly used data fields. A
selector selects the input format for generating the global **query**
from one of the global and local formats. An input translator converts
the value of the data field in the global **query** into local values in

the respective local formats.

The data information manager (DIM) generates local **queries** including the local values for the data field in response to the global **query** and in accordance with the respective configuration data. A number of local information managers (LIMs) execute the local **queries** to **search** for and retrieve from the respective local databases data that is associated with the local values of the data field, the LIMs passing the data back to the dimension where it is combined to present the **requesting** user with an integrated response. An output translator converts the data passed back from the LIMs from their respective local formats into the input format so that the data can be combined to present the user with the integrated response.

ADVANTAGE - Efficiently and truly integrates data from number of interconnected and heterogeneous local databases to provide user's with access to virtual database. Better user friendliness. Increases completeness of **search** .

Dwg.1/11

Title Terms: SYSTEM; INTEGRATE; DATA; MULTIPLE; INTERCONNECT; LOCAL; USER; ACCESS; VIRTUAL; DATABASE; USER; INTERFACE; GENERATE; GLOBE; **QUERY** ; **SEARCH** ; VIRTUAL; DATABASE; DIM; DECOMPOSE; GLOBE; **QUERY** ; LOCAL; **QUERY** ; NUMBER; EXECUTE; LOCAL; **QUERY** ; **SEARCH**

Index Terms/Additional Words: **DATA   INFORM   ATION   _MANA   GER_L   OCAL_I** ; INFORMATION; MANAGER; LOCAL; INFORMATION; MANAGER

Derwent Class: T01

International Patent Class (Main): **G06F-017/30**

International Patent Class (Additional): **G06F-015/16**

File Segment: EPI

26/5/60   (Item 50 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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011293792   **Image available**

WPI Acc No: 1997-271697/199724

XRPX Acc No: N97-225224

Identifying textual documents and multimedia files corresponding to search **topic - accepting** query **and returning single** search **results list having text and multimedia information**

Patent Assignee: INFONAUTICS CORP (INFO-N)

Inventor: BARR T; BEATTIE J T; HUSICK L A; KOPELMAN J; KRUPIT M S; MORGAN H ; WATKEYS E H; WEINBERGER M I

Number of Countries: 024 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9710537	A2	19970320	WO 96US15664	A	19960913	199724	B
AU 9672026	A	19970401	AU 9672026	A	19960913	199730	
WO 9710537	A3	19970424	WO 96US15664	A	19960913	199731	
US 5659742	A	19970819	US 95528683	A	19950915	199739	
US 5675788	A	19971007	US 95529233	A	19950915	199746	
US 5742816	A	19980421	US 95529250	A	19950915	199823	

Priority Applications (No Type Date): US 95529250 A 19950915; US 95528683 A 19950915; US 95529233 A 19950915

Cited Patents: No-SR.Pub; US 5241671; US 5404435; US 5404506; US 5524193

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9710537	A2	E	90	G06F-000/00	

Designated States (National): AU CA CN JP MX NZ
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

AU 9672026	A			G06F-019/00	Based on patent WO 9710537
US 5659742	A		43	G06F-017/30	
US 5675788	A		44	G06F-017/30	
US 5742816	A		43	G06F-017/30	
WO 9710537	A3			G06F-000/00	

Abstract (Basic): WO 9710537 A
    The method for identifying textual documents and multimedia files
involves storing a number of document and multimedia records each of
which represent a document or multimedia file. The document records
have associated text information fields, each of which represents text
from one of the textual documents, and the multimedia records have
multimedia information fields representing only digital video or audio
information and associated text fields, each representing text
associated with one of the multimedia information fields.
    A single **search** **query** corresponding to the **search** topic is
received pref in a natural language format, and an index database is
searched in accordance with the single **search** **query** to
simultaneously identify document records and multimedia records related
to the single **search** **query** . A **search** result list having entries
representing both textual documents and multimedia files related to the
single **search** **query** is generated in accordance with the document
records and the multimedia records identified by the index database
search . Text or digital video or audio information corresponding to
the **search** topic is retrieved by selecting entries from the. **search**
result list.
    USE - Automated multi-user system for identifying and retrieving
text and multi-media files from various publisher sources.
    ADVANTAGE - Enables **searching** and retrieval of library or
database to identify text documents and multimedia files relevant to
query .
    Dwg.4/12
Title Terms: IDENTIFY; TEXT; DOCUMENT; FILE; CORRESPOND; **SEARCH** ; TOPIC;
  ACCEPT; **QUERY** ; RETURN; SINGLE; **SEARCH** ; RESULT; LIST; TEXT;
  INFORMATION
Derwent Class: T01
International Patent Class (Main): **G06F-000/00** ; **G06F-017/30** ;
  G06F-019/00
File Segment: EPI

26/5/61   (Item 51 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011025802   **Image available**
WPI Acc No: 1997-003726/199701
XRPX Acc No: N97-003306
  **Database search system e.g. for patent official report, scientific paper,
  newspaper report - has index search part and whole sentence search part
  with which database is searched according to input search type**
Patent Assignee: NIPPON STEEL CORP (YAWA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8272806	A	19961018	JP 9577839	A	19950403	199701	B

Priority Applications (No Type Date): JP 9577839 A 19950403
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8272806	A		8	G06F-017/30	

Abstract (Basic): JP 8272806 A
    The system has a database storing part (11) in which the database
is searched. A search type is given as the input to an input part (15).
A division part (21) **divides** the search type to a single term type.
Two search parts, an index search part (13) and a whole sentence search
part (14) are also provided.
    An assignment part (32) assigns the single term type to both the
search parts respectively. An arithmetic part (33) carries out logical
operation of the results obtained from the index search and the whole
sentence search parts, based on the search type and gives an output to
a display part (16).

ADVANTAGE - **Searches database efficiently ,** using **multiple
search** techniques.
        Dwg.1/4
Title Terms: DATABASE; SEARCH; SYSTEM; PATENT; OFFICE; REPORT; SCIENCE;
  PAPER; NEWSPAPER; REPORT; INDEX; SEARCH; PART; WHOLE; SENTENCE; SEARCH;
  PART; DATABASE; SEARCH; ACCORD; INPUT; SEARCH; TYPE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/62   (Item 52 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011013400   **Image available**
WPI Acc No: 1996-510350/199651
XRPX Acc No: N96-430220
  Parallel text search **system for text** search **processing - has feedback
  unit which repeats** searching **again using parallel calculation until
  question sentence vector satisfies user conformity for** search **result**
Patent Assignee: ATR ONSEI HONYAKU TSUSHIN KENKYUSHO KK (ATRO-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 8263517   A   19961011 JP 9569471   A   19950328 199651 B

Priority Applications (No Type Date): JP 9569471 A 19950328
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 8263517   A   10 G06F-017/30

Abstract (Basic): JP 8263517 A
        The system has a wt. factor generator (1) which forms a wt. vector
    by calculating the wt. degree of **importance** for each term. A memory
    (11) stores the x piece number to distribute the wt. vector of each
    text formed by the wt. factor generator.
        A processor calculates and outputs the score in which the
    similarity between each text wt. vector and the wt. vector corresp. to
    a question sentence is shown. A **search** processor (2) outputs the
    search result and rearranges the scores in a descending order based on
    the output score. A feedback unit repeats **searching** using parallel
    calculation depending on the question sentence vector updated according
    to the conformity of the user.
        ADVANTAGE - Enables processing **several** text **databases** since
    speedy text **search** is performed.
        Dwg.1/7
Title Terms: PARALLEL; TEXT; **SEARCH** ; SYSTEM; TEXT; **SEARCH** ; PROCESS;
  FEEDBACK; UNIT; REPEAT; **SEARCH** ; PARALLEL; CALCULATE; QUESTION; SENTENCE
  ; VECTOR; SATISFY; USER; CONFORM; **SEARCH** ; RESULT
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/63   (Item 53 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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010790425   **Image available**
WPI Acc No: 1996-287378/199629
XRPX Acc No: N96-241183
  **Providing extensible query architecture for information retrieval system
  - includes search application that has variety of code module classes,
  each implementing specific type of query model on data types in database**
Patent Assignee: ARCHITEXT SOFTWARE INC (ARCH-N); EXCITE INC (EXCI-N)
Inventor: SPENCER G

Number of Countries: 068   Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9618159	A2	19960613	WO 95US16496	A	19951207	199629	B
AU 9646413	A	19960626	AU 9646413	A	19951207	199641	
WO 9618159	A3	19960906	WO 95US16496	A	19951207	199645	
US 5577241	A	19961119	US 94350967	A	19941207	199701	
EP 796470	A1	19970924	EP 95944342	A	19951207	199743	
			WO 95US16496	A	19951207		
EP 796470	B1	19990414	EP 95944342	A	19951207	199919	
			WO 95US16496	A	19951207		
DE 69509118	E	19990520	DE 609118	A	19951207	199926	
			EP 95944342	A	19951207		
			WO 95US16496	A	19951207		
ES 2132769	T3	19990816	EP 95944342	A	19951207	199939	

Priority Applications (No Type Date): US 94350967 A 19941207
Cited Patents: Jnl.Ref; No-SR.Pub
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9618159	A2	E	26	G06F-017/30	

Designated States (National): AL AM AT AU BB BG BR BY CA CH CN CZ DE DK
EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MK MN MW MX
NO NZ PL PT RO RU SD SE SG SI SK TJ TM TT UA UG UZ VN
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT KE LS LU
MC MW NL OA PT SD SE SZ UG

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
AU 9646413	A			G06F-017/30	Based on patent WO 9618159
US 5577241	A		14	G06F-017/30	
EP 796470	A1	E		G06F-017/30	Based on patent WO 9618159

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC
NL PT SE

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 796470	B1	E		G06F-017/30	Based on patent WO 9618159

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC
NL PT SE

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 69509118	E			G06F-017/30	Based on patent EP 796470
					Based on patent WO 9618159
ES 2132769	T3			G06F-017/30	Based on patent EP 796470
WO 9618159	A3			G06F-017/30	

Abstract (Basic): WO 9618159 A
     The system has an extensible query architecture which allows an
applications programmer to integrate new query models into the system
as desired. The architecture is based on an abstract base class of
query nodes, or code objects that retrieve records from the database.
Specific sub-classes are derived from the base class. Each query node
class includes a **search function** that iteratively **searches** the
database for matching records. Query node objects are instantiated by
associated node creator class objects.
     A parser is used to **parse** a search query into its components,
including nested search queries used to combine various query models.
The parser determines the particular search operator keywords and the
node creator object. The node creator objects return pointers to the
created query nodes.
     ADVANTAGE - Allows parser to assemble complex hierarchical query
nodes that combine multiple query models.
     Dwg.1/6
Title Terms: EXTEND; QUERY; ARCHITECTURE; INFORMATION; RETRIEVAL; SYSTEM;
  SEARCH; APPLY; VARIETY; CODE; MODULE; CLASS; IMPLEMENT; SPECIFIC; TYPE;
  QUERY; MODEL; DATA; TYPE; DATABASE
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

 26/5/64   (Item 54 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010427087   **Image available**
WPI Acc No: 1995-328407/199542
XRPX Acc No: N95-247149
   **Goods and services computer assisted brokering system - uses database
   with buyer and seller interfaces containing multimedia information
   describing respective goods and services**
Patent Assignee: EAGLEVIEW INC (EAGL-N)
Inventor: BORGMAN J D; HOLTEY T O; SALMON B C
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9524687	A1	19950914	WO 95US3117	A	19950309	199542	B
AU 9519966	A	19950925	AU 9519966	A	19950309	199601	
US 5592375	A	19970107	US 94212349	A	19940311	199708	

Priority Applications (No Type Date): US 94212349 A 19940311
Cited Patents: US 4775935; US 4780599; US 4992940; US 5032989; US 5053956;
   US 5117353; US 5122952; US 5164897; US 5237157; US 5283731; US 5331546;
   US 5367627
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9524687	A1	E	81	G06F-017/60	
AU 9519966	A			G06F-017/60	Based on patent WO 9524687
US 5592375	A		56	G06F-017/60	

Abstract (Basic): WO 9524687 A
      The computer implemented system for brokering transactions between
   sellers and a buyer of goods or services has a database containing
   information, including multimedia information, descriptive of
   respective goods and services. A seller interface interactively enables
   the seller to enter the descriptive information, including the
   multimedia information, into the database.
      A buyer interface interactively uses a knowledge-based protocol,
   enabling the buyer to select and review the descriptive information
   from the database. The buyer interface makes perceptible the multimedia
   information in response to an interactive buying **request** .
      USE/ADVANTAGE - Allows information to be submitted to buyer in
   number of forms. Records all transactions automatically.
      Dwg.1/7
Title Terms: GOODS; SERVICE; COMPUTER; ASSIST; SYSTEM; DATABASE; BUY;
   INTERFACE; CONTAIN; INFORMATION; DESCRIBE; RESPECTIVE; GOODS; SERVICE
Derwent Class: T01; W01
International Patent Class (Main): **G06F-017/60**
International Patent Class (Additional): **G06F-017/30 ; G06F-019/00**
File Segment: EPI

```
Set      Items    Description
S1      1942334   QUER? OR SEARCH? OR REQUEST?
S2        40883   (PLURAL? OR VARIOUS OR SEVERAL OR MULTIPL? OR MANY OR NUME-
                  ROUS OR UNLIMITED)(2N)(DATA()BASE? OR DATABASE?)
S3       101506   DICTIONAR? OR GLOSSAR? OR LEXICON? OR VOCABULAR? OR THESAU-
                  RUS
S4      2648400   STRENGTH OR WEIGHT? OR SIGNIFICANCE OR INFLUENCE OR IMPORT-
                  ANCE OR RANK?
S5      1372381   DATABASE? OR DATA()BASE?
S6      3358347   PARTITION? OR PARSE OR PARSING OR SPLIT? OR DIVIDE? OR SEC-
                  TION? OR SEGMENT? OR SEPARATE? (5N) S1
S7        32220   (OPTIMIZ? OR PERFECT? OR FUNCTION? OR EFFECTIVE? OR EFFICI-
                  ENT?)(2N)S1
S8         2820   S3 (S) S4
S9         1395   S6 (S) S2
S10           3   S8 (S) S9
S11          15   S9 (S) S7
S12          29   S9 (S) S3
S13          41   S9 (S) S4
S14         413   S2 (S) S3
S15          19   S14 (S) S8
S16          24   S8 (S) S7
S17        2820   S8 (S) S4
S18        7216   S1 (S) S2
S19           7   S18 (S) S8
S20.          7   S1 (S) S2 (S) S3 (S) S4
S21           7   S20 (S) S4
S22           3   S12 (S) S13
S23          57   S10 OR S11 OR S15 OR S16 OR S19 OR S20 OR S21
S24          49   S23 NOT PY>2001
S25          44   S24 NOT PD>20010228
S26          42   RD (unique items)
File   15:ABI/Inform(R)  1971-2003/Dec 12
           (c) 2003 ProQuest Info&Learning
File 810:Business Wire 1986-1999/Feb 28
           (c) 1999 Business Wire
File 647:CMP  Computer Fulltext 1988-2003/Dec W1
           (c) 2003 CMP Media, LLC
File 275:Gale Group Computer DB(TM) 1983-2003/Dec 11
           (c) 2003 The Gale Group
File 674:Computer News Fulltext 1989-2003/Dec W1
           (c) 2003 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2003/Dec 11
           (c) 2003 The Dialog Corp.
File 624:McGraw-Hill Publications 1985-2003/Dec 11
           (c) 2003 McGraw-Hill Co. Inc
File 636:Gale Group Newsletter DB(TM) 1987-2003/Dec 11
           (c) 2003 The Gale Group
File 813:PR Newswire 1987-1999/Apr 30
           (c) 1999 PR Newswire Association Inc
File 613:PR Newswire 1999-2003/Dec 12
           (c) 2003 PR Newswire Association Inc
File  16:Gale Group PROMT(R) 1990-2003/Dec 11
           (c) 2003 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
           (c) 1999 The Gale Group
File 553:Wilson Bus. Abs. FullText 1982-2003/Oct
           (c) 2003 The HW Wilson Co
```

26/3,K/1   (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

02035945 55373353
User interface design for speech-based retrieval
Oard, Douglas W
American Society for Information Science. Bulletin of the American Society
for Information Science v26n5 PP: 20-22 Jun/Jul 2000
ISSN: 0095-4403 JRNL CODE: BAS
WORD COUNT: 2202

...TEXT: the program title or the source (e.g., broadcast network) are
shown. If we wish to support **effective** natural language **searching** , we
will probably need to provide the user with a far richer view of the search
results...

... has explored the use of named entity extraction and automatic
classification to associate proper names and controlled **vocabulary**
keywords with a speech recognition transcript. At the University of
Maryland we are exploring the utility of...

26/3,K/2   (Item 2 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01485274 01-36262
Compression theory
McGillis, Peggy; Nichols, Mina; Terry, Britt
Computer Technology Review PP: 60-61+ Summer 1997
ISSN: 0278-9647 JRNL CODE: CTN
WORD COUNT: 2498

...TEXT: for the symbol. The longer the match, the better the compression
ratio.

An advantage to using a **dictionarybased** method is that **dictionary**
entries may be of various lengths. For instance, an incrementing pattern of
OOh to FFh may require only one entry into the **dictionary** . Patterns
consisting of continuous repeating data, such as all FFh or all OOh, will
compress very efficiently assuming the maximum **dictionary** word length is
sufficiently large to describe the repeating portion. The **importance** of
this technology in today's backup devices is huge. The data stored on disk
drives is typically very redundant in cases where the disk or a relational
database tablespace is not full. Also, **many** tablespaces of **database**
 files contain repeating text which can easily be included in the
 dictionary .
This method of data compression focuses primarily on the encoding
dictionary. Simple coding methods generally focus on...

26/3,K/3   (Item 3 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01280818 99-30214
A new patent search tool for the Internet: QPAT-US
Lambert, Nancy
Database v19n4 PP: 56-61 Aug/Sep 1996
ISSN: 0162-4105 JRNL CODE: DTB
WORD COUNT: 3247

...TEXT: every one of the top-ranked included one of the misspelled words
in its text.

The second **vocabulary** aid produces a list of "statistically related"
terms from which to choose. The system looks at the...

... search produced and generates a list of other terms in the documents by a sort of relevance **ranking** : terms that occur most frequently in these documents compared to their frequency in the whole database. From...

... catalytic," and "catalyzed," and the resulting search set was significantly enlarged (183,330 patents), suggesting that the **search** term stemming **function** did not include all these terms. The "statistically related" function also suggests nonalphabetically-related terms of interest ...

26/3,K/4   (Item 4 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01231692 98-81087
The engines that can
Joss, Molly W; Wszola, Stanley
CD-ROM Professional v9n6 PP: 30-38+ Jun 1996
ISSN: 1049-0833 JRNL CODE: LDP
WORD COUNT: 5238

...TEXT: a search engine equipped to manage databases of multi-terabyte size. The engine serves numerous concept-based **search functions** ; for example, it understands idiomatic phrases, and automatically expands the user's search term to cover sets of equivalent words through its more than a quarterof-a-million-word **thesaurus** .

(Table Omitted)

(Photograph Omitted)

Perhaps even further along the path of nontraditional text retrieval is HNC Software...

26/3,K/5   (Item 5 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01172548 98-21943
Supplement to 1995 ASIS annual meeting proceedings
Anonymous
American Society for Information Science. Bulletin v22n2 PP: 21-27 Dec 1995/Jan 1996
ISSN: 0095-4403 JRNL CODE: BAS
WORD COUNT: 5098

...TEXT: in SGML markup format and include text, figures, images and equations. The Illinois DLI Project is investigating **effective search** and retrieval database structures and interface designs that utilize the ability of SGML to identify the content...

... set includes multimedia context-sensitive help and demonstration searches; dynamic word wheel displays (letter-by-letter word **dictionary** displays); word spell checking; search trees, result **ranking** and best match searching; and links to thesauri and related word strings generated by co-occurrence **rankings** .

Ray R. Larson, School of Library and Information Studies, University of California at Berkeley, Berkeley, California Cheshire...

26/3,K/6   (Item 6 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01094347 97-43741
The ONLINE 100: ONLINE Magazine's Field Guide to the 100 Most Important Online Databases
Gehrig, Virginia Gatcheff
Information Today v12n8 PP: 19, 22 Sep 1995
ISSN: 8755-6286 JRNL CODE: IFT
WORD COUNT: 531

...TEXT: much less painful with his collection of the best 100 databases. The book is a directory of **various** types of **databases** available in the online world. Each database profile contains a brief description of the database, a "Content Notes" **section** , which summarizes the content of the database, a "Search Notes" **section** , which gives tips on **effective searching** , a **section** called "Do Not Use For," which notes the limitations of the database, and the "Key Facts" **section** , which lists the time span of the database, the producer, which systems carry it, where to find...

  26/3,K/7   **(Item 7 from file: 15)**
DIALOG(R)File 15:ABI/Inform(R)

01084169 97-33563
Finding case studies online
Ojala, Marydee
Online v19n5 PP: 32-36 Sep/Oct 1995
ISSN: 0146-5422 JRNL CODE: ONL
WORD COUNT: 3039

...TEXT: to help you find case studies. Look at UMI's files, for example. ABI/INFORM recognized the **importance** of case studies early and created a standalone **thesaurus** term for the concept. A search for your topic combined with the descriptor term, Case Studies, makes a very **effective search** strategy. This descriptor is not used in UMI's Business Dateline file, although one record did manage...

  26/3,K/8   **(Item 8 from file: 15)**
DIALOG(R)File 15:ABI/Inform(R)

01059068 97-08462
DataTimes' big move
O Leary, Mick
Information Today v12n6 PP: 16-17+ Jun 1995
ISSN: 8755-6286 JRNL CODE: IFT
WORD COUNT: 1873

...TEXT: diverse set of databases. The screens are bright, attractive, and uncluttered. In both novice and command modes, **search** steps are **efficiently** and logically presented. Documentation in the Windows Help **section** is clear and thorough. EyeQ's major weakness is in the arrangement of **databases** . **Several** preformatted groupings are provided, but it is not easy to tell what sources are in what category...

  26/3,K/9   **(Item 9 from file: 15)**
DIALOG(R)File 15:ABI/Inform(R)

01045495 96-94888
SilverPlatter CD-ROM discs
Ashworth, Wilfred
New Library World v96n1121 PP: 37 1995
ISSN: 0307-4803 JRNL CODE: NLW
WORD COUNT: 658

...TEXT: is almost a quarter of an inch thick and runs to 92 pages listing
more than 200 **databases** . **Many** of these **databases** are available from
other suppliers but differ in the layout and in the search software which
accompanies...

...their discs--a distinct advantage because it has to be learned only once
and the owner of **several databases** does not have to install special
software for each which would take up valuable space on hard disk.
Currently the **search** software comes on a **separate** CD-ROM which will
install either SPIRS for DOS, or WINSPIRS (the Windows version). It also
carries...

... edition of a textual database is one which can be confidently
recommended for ease of use and **effective searching** .
Nursing and Allied Health (CINAHL) is a comprehensive database of citations
to nursing and health literature, 1983...

  26/3,K/10   **(Item 10 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)
(c) 2003 ProQuest Info&Learning. All rts. reserv.

00771568 94-20960
Search patterns of remote users: An analysis of OPAC transaction logs
Millsap, Larry; Ferl, Terry Ellen
Information Technology & Libraries   v12n3 PP: 321-342 Sep 1993
ISSN: 0730-9295 JRNL CODE: JLA
WORD COUNT: 9336

...TEXT: A zero retrieval in itself is neutral. It must always be viewed in
some context to gain **significance** . For example, a knowledgeable observer
may detect that a **search** word is misspelled, a command word is invalid, a
search term does not match the controlled **vocabulary** of the index being
searched , and so forth. Or the observer may note that a succession of
searches strongly suggests the user is in the wrong database.
Nevertheless, OPAC system designers and researchers remain concerned about
large numbers of **searches** with zero retrievals. In 1988, Clifford Lynch
stated that the statistics for zero retrievals in the MELVYL catalog were
"alarming." At that time, about 31.5% of MELVYL **searches** in COMMAND mode
resulted in zero retrievals. The figure still remains at that level. For
Lynch's concerns on this and related matters, see his "Large **Database** and
Multiple Database Problems in Online Catalogs," in OPACs and Beyond
(Dublin, Ohio: OCLC, 1989).
18. A MELVYL catalog session...

  26/3,K/11   **(Item 11 from file: 15)**
DIALOG(R)File   15:ABI/Inform(R)
(c) 2003 ProQuest Info&Learning. All rts. reserv.

00728298 93-77519
"Overnight Delivery" and Records Management - Microwave Style
Hartinger, Verna J.
Information Today v9n7 PP: 30-32 Jul/Aug 1992
ISSN: 8755-6286 JRNL CODE: IFT
WORD COUNT: 1479

...TEXT: member, expanding her role to system administrator/database
analyst, has since successfully converted or designed over 60 **databases**
for **numerous** applications including a product literature file with
integrated **thesaurus** , current awareness publication production system
with Microsoft Word compatible output formats, library book acquisitions
chargeback and statistical reporting system, online catalog, serials
check-in and routing, literature **search** chargeback, and statistical
reporting system with output to EXCEL, etc. A major **strength** of this
system is the ability to bring up new applications virtually with the speed
of light...

26/3,K/12   (Item 12 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00663577 93-12798
Belief function model for information retrieval
da Silva, Wagner Teixeira; Milidiu, Ruy Luiz
Journal of the American Society for Information Science   v44n1   PP: 10-18
Jan 1993
ISSN: 0002-8231   JRNL CODE: ASI

ABSTRACT: The Belief Function Model (BFM) for automatic indexing and
 ranking of documents with respect to a given user query is presented.
This model is based on a controlled **vocabulary** , like a **thesaurus** , and
on term frequencies in each document. Descriptors in the **vocabulary** are
terms selected from among their synonyms to be used as index terms. It is
possible for...

... models are not adequate to handle them. However, a belief function can
still be defined over a **thesaurus** of descriptors. Belief functions over
the descriptors can represent a document or a user query. The agreement
between a document belief **function** and a **query** belief **function** can be
computed.   Therefore, it is proposed that the set of documents be **ranked**
according to their agreement with the given user query. The BFM is shown to
be wider in...

26/3,K/13   (Item 13 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00655519 93-04740
Holding the Reins on Distributed Databases
Wolfson, Ken
Chief Information Officer Journal   v5n2   PP: 48-51   Fall 1992
ISSN: 0899-0182   JRNL CODE: CJL
WORD COUNT: 1664

...TEXT: basic concepts.

WHAT IS A DISTRIBUTED DATABASE?

Distributed database is a catch-all term used to describe **several** types
of **database** processing capabilities--specifically, remote request, remote
unit of work, distributed unit of work, and distributed request. Of...

... database processing, only the distributed unit of work and distributed
request support transactions in which data are **split** across two or more
physical databases. This is what people usually think of when they hear
"distributed...

... per transaction. Some basic definitions follow. For consistency, the
term client is used to describe any application **function** that **requests**
 services (e.g., create, read, update, delete) from a database.

REMOTE REQUEST. A remote request allows a...

26/3,K/14   (Item 14 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00495452 90-21209
Semi-Automatic Determination of Citation Relevancy: User Evaluation
Huffman, G. David
Information Processing & Management v26n2 PP: 295-302 1990
ISSN: 0306-4573 JRNL CODE: IPM

ABSTRACT: Online bibliographic, database **searches** typically generate hundreds of retrieved citations with only about 20%-40% relevant to the **search** topic and/or problem statement. A significant amount of time is required to categorize and select the relevant citations. A software system, SORT-AID/SABRE, has been developed that analyzes citations from **various databases**, reviews, categorizes, and **searches** citations for specified text strings, **ranks** the citations by relevance, and prints the citations in a user-specified format. The citation- **ranking** process uses a **thesaurus** of terms selected from the citations using lexical association metrics. The user provides a relevancy evaluation of each term. The user term assessment is combined with lexical association metrics, and the citations are **ranked** by relevance. A comprehensive user evaluation of the relevance- **ranking** procedures shows that the software generated distributions approach those of the end user in 22% of the...

26/3,K/15   (Item 15 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00486100 90-11857
A Framework for Evaluating CD-ROM Retrieval Software
Nicholls, Paul; Han, Isaac; Stafford, Karen; Whitridge, Katherine
Laserdisk Professional   v3n2 PP: 41-46 Mar 1990
ISSN: 0896-4149 JRNL CODE: LDP

...ABSTRACT: the   retrieval   engine   supplied   with   the   product.   The proliferation of software and the increasing availability of single **databases** under **several** different access programs make software evaluation an important component in the overall CD-ROM assessment process. When...

.... most important evaluation criteria are users, requirements, and constraints. Other evaluation criteria for access software can be **divided** into 5 broad categories: 1. hardware and software dependencies, 2. interface features, 3. **search** and retrieval **functions**, 4. output functions, and 5. general production features. A checklist is provided that outlines the general evaluation...

26/3,K/16   (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext

00598125   CMP ACCESSION NUMBER: CWK19911209S0297
Gupta Preps SQLBase NLM-Claims database performs at twice the speed of Oracle's NLM
MICHAEL DORTCH ; STANLEY GIBSON
COMMUNICATIONSWEEK, 1991, n 381, 1
PUBLICATION DATE: 911209
JOURNAL CODE: CWK   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: News
WORD COUNT: 738

...   features discussed in August, which the CTA's Saks said apparently have been implemented, included support for **databases   partitioned** across **multiple** disk drives or servers, faster and more **efficient** database **queries**, and maintenance of data integrity during accesses and manipulations by multiple users.
     All versions of SQLBase Server...

26/3,K/17   (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01998663   SUPPLIER NUMBER: 18733376   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Performance tuning. (Seven DBMS utilities) (Product Information)
Rennhackkamp, Martin
DBMS, v9, n11, p85(5)
Oct, 1996
ISSN: 1041-5173   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 5474   LINE COUNT: 00429

...   when reasonably stable tables are often joined by exact-match
queries.
        You can select whether Oracle must **optimize** your **queries** using
its older rule-based optimizer or its newer cost-based optimizer. The
rule-based optimizer chooses an execution plan based on the available
access paths and the **ranks** of these access paths in a published table.
The cost-based optimizer chooses an execution plan based on the available
access paths as well as on statistics in the data **dictionary** for the
tables, clusters, and indexes. You can also add so-called "hints" (or
optimization suggestions) to...

 26/3,K/18   (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01839641   SUPPLIER NUMBER: 17486933
Winning the client-server game.(ODBC)
Malik, A. Nicklas
Windows Tech Journal, v4, n8, p28(5)
August, 1995
ISSN: 1061-3501   LANGUAGE: English   RECORD TYPE: Abstract

...ABSTRACT: Jet engine provides a common way to use ODBC. Jet includes a
full SQL engine, and can **parse** SQL statements and **optimize** **queries** .
Jet is tuned to interface with server data, and permits both forward and
backward motion without having to manage **multiple   database** connections.
Jet's Data Object layer provides a single access method, and makes
databases available to custom...

 26/3,K/19   (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01776287   SUPPLIER NUMBER: 16854952   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Complex databases can speed response via parallel hardware, software
   design.**
Gallagher, Bob
PC Week, v12, n16, p83(1)
April 24, 1995
ISSN: 0740-1604   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 1176   LINE COUNT: 00096

...   already added them to their products. The databases simply
coordinate multiple load or dump tasks running on **separate** processors.
        Optimizing   queries for quicker response is more difficult and is
probably the main area on which vendors of parallel...

 26/3,K/20   (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01707742   SUPPLIER NUMBER: 16285678   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Pass the word, keep the data. (BrainTree Technology Inc's SQL<>Secure
   Database Password Manager) (Product Announcement)**
Morrison, Kristine M.
DEC Professional, v13, n9, p16(1)
Sept, 1994

...ABSTRACT: database systems. The software includes a password client and
server, and a password checker. The client portion **requests** usernames and
passwords, and the server keeps a table of password data. The table can be
accessed...

...server can synchronize database and operating system passwords, and can
update other password servers for synchronization across **multiple
databases** . The server also contains a **dictionary** of passwords that are
thought to be easily guessable, and will provide users with a **ranking** of
their password's guessability.

26/3,K/21   (Item 5 from file: 275)

01687692   SUPPLIER NUMBER: 15516955   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Xyvision's PDM: integrated document and workflow management. (Parlance
   Document Manager document sharing and workgroup software) (includes
   related articles on a glossary of Xyvision PDM terms, an Xyvision company
   profile and PDM system pricing) (Cover Story)**
Karsh, Arlene E.
Seybold Report on Publishing Systems, v23, n17, p3(27)
May 30, 1994

...   into managing more diverse objects, including video, animation and
even sound, other viewers will also be necessary. * **Multiple   database**
access. Xyvision has gone the extra mile to accommodate user **requests** for
additional **functionality** thus far, and we would expect it to continue in
this manner. The new Windows client, undoubtedly...

...of the software. Another user-oriented refinement that we think deserves
attention is the ability to access **multiple   databases** (currently there
can be only one) using the same sql sequences and interface. Many sites
will have...

26/3,K/22   (Item 6 from file: 275)

01651543   SUPPLIER NUMBER: 15590489
Progress in database search strategies.
Yu, Clement; Meng, Weiyi
IEEE Software, v11, n3, p11(9)
May, 1994
ISSN: 0740-7459   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

...ABSTRACT: records. However, such precision and speed is difficult and
costly to achieve where data is dispersed among **many** relational
databases located throughout a network. This is especially so if data is
unstructured. For a distributed relational database system where relations
are commonly **divided** up into fragments, there are several recommended
methods to **efficiently** act on **queries** . Among them are the
identification of local processing opportunities, adoption of a
fragment-and-replicate strategy, use of **partition** -and-replicate technique
and hashed **partitioning** . For heterogeneous multidatabases, there are
several factors to consider such as the front end, schema integration and
...

26/3,K/23   (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01624867   SUPPLIER NUMBER: 14468976   (USE FORMAT 7 OR 9 FOR FULL TEXT)
SuperNova version 3.2. (Four Seasons Software Inc.'s database application
   development software) (Software Review) (Evaluation)
Linthicum, David
DBMS, v6, n12, p30(3)
Nov, 1993
DOCUMENT TYPE: Evaluation   ISSN: 1041-5173   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1507   LINE COUNT: 00124

...   read the database schema of any of the DBMSs it supports and
automatically construct its own data **dictionary** . The data **dictionary**
always looks the same, no matter what DBMS you are employing. Therefore,
you can easily apply applications...

...the database products that SuperNova supports -- your choice of database
proves unimportant You can easily develop for **multiple   database** servers
with virtually no extra learning curve or code changes. This independent
data **dictionary** is another **strength** of the product.
      Distributing Data
      You can distribute your databases anywhere on a network. The
administrator need...

26/3,K/24   (Item 8 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01584388   SUPPLIER NUMBER: 13440954   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Creating a CD-ROM: overview of the product field. (CD-ROM authoring and
   data retrieval software packages; includes company directory and related
   article on resources for doing research) (Buyers Guide)
Banet, Bernard
Seybold Report on Desktop Publishing, v7, n6, p3(29)
Feb 1, 1993
DOCUMENT TYPE: Buyers Guide   ISSN: 0889-9762   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT
WORD COUNT: 17829   LINE COUNT: 01443

...   but at present pages are not represented as such.
      Graphics and text can be viewed together or **separately** , depending on
the platform. **Searches** can be done across multiple documents on **multiple**
   databases . Relevance **ranking** is determined by number of matches within
a document. A **dictionary** is provided to identify terms in the database
and ensure proper spelling. Proximity and Boolean **searches** are supported.
      Some Hyperlinks are pre-indexed, such as references, citations and a
table of contents outline...

26/3,K/25   (Item 9 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01466400   SUPPLIER NUMBER: 11643812   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Pushing Oracle to the limit: rules of thumb for getting top performance
   from Oracle Server. (Hands On) (Tutorial)
Butler, Brian; Strehlo, Kevin
DBMS, v4, n13, p58(6)
Dec, 1991
DOCUMENT TYPE: Tutorial   ISSN: 1041-5173   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 5105   LINE COUNT: 00381

...   an index leaf page to the data page.

It is also important to realize that Oracle's **query** **optimizer**
does not use statistical methods in order to pick a articular access path.
In order to build the **query** plan, the **optimizer** first parses the SQL
statement to determine which database objects are being referenced; second,
it initiates a query of the data- **dictionary** to learn about the type,
content, and location of those objects; and third, it uses a query of the
data **dictionary** to see what indexes are available for use in building the
query plan. Once the optimizer has identified all possible access paths, it
ranks them according to the rules shown here and chooses the highest
ranking path:
    1. ROWID = constant is the fastest path to a row.
    2. Indexed columns are better than...

26/3,K/26   (Item 10 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01448851   SUPPLIER NUMBER: 11278335   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Help rushes to the front; GUI tools rolling out as enabling machines,
software proliferate. (Data Resource Management: Moving to Server
Databases)(graphical user interface) (Client/Server Computing supplement
to Software Magazine)
Bochenski, Barbara
Software Magazine, v11, n11, pS18(2)
Sept, 1991
ISSN: 0897-8085   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 924   LINE COUNT: 00079

ABSTRACT: Front-end tools are becoming available for client-server
architecture that use PC graphics, connect to **several** server **databases**
and provide powerful object-oriented functions for professional
applications developers. The tools support shared repository and data
dictionary environments across networks in a client/server mode and are
project-oriented for teams, according to Digital...

...the debugger and another examining the output from the program.
Powersoft's PowerBuilder is one such industrial- **strength** front-end tool,
according to Schussel; the program runs under Windows 3.0, but future
releases will...

26/3,K/27   (Item 11 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01308184   SUPPLIER NUMBER: 07735178   (USE FORMAT 7 OR 9 FOR FULL TEXT)
The state of play in the world of IBM's DB2 - 2. The benefits of release
2.2.
White, Peter
Computergram International, n1279, CGI10060009
Oct 6, 1989
ISSN: 0268-716X   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 1258   LINE COUNT: 00092

...   are they? The answer is query speed and distributed database.Well,
as the entire world knows distributed **database** means **many** things to
many people, and most of them don't work. However on the query front, IBM
...

...query. It has done this by using multiple index access paths or
multi-index searching.Imagine a **query** that wants to explore three
separate fields, dictating a maximum or minumum value to each and slim
down the records just to those that comply. It is the sort of **query**
function that relational databases seemed to be invented for, for instance
"Find me all the employees that have...

01185869   SUPPLIER NUMBER: 04711206
CD-ROM technology takes off. (PC VAR Report supplement to Computer Reseller News)
Trespasz, Nancy
Computer Reseller News, n195, pS34(2)
March 16, 1987
ISSN: 0893-8377   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

ABSTRACT: The CD-ROM market is growing in **strength** and showing greater
potential. Frost and Sullivan says that CD-ROM has greater potential for
acceptance as...

...software developers hesitant to write for CD-ROM until more disks are on
the market. Analysts predict **many** CD-ROM **databases** will enter the
market in 1987, and Dataquest forecasts an installed base of 60,000 CD-ROM
...

...programs; R.R. Bowker's CD-ROM versions of "Books in Print" and
"Ulrich's International Periodical **Dictionary** ". Sony Corp. makes a $500
CDU-100 with a built-in power supply, the $400 CDU-5002...

01119755   SUPPLIER NUMBER: 00629092
Enquire Within: Hints on Constructing a Free-Text Data Base.
Lewis, M.
Practical Computing, v8, n6, p43-44
June, 1985
DOCUMENT TYPE: column   ISSN: 0141-5433   LANGUAGE: ENGLISH
RECORD TYPE: ABSTRACT

...ABSTRACT: index can be cut down more by compressing the words into
6-bit characters and using a **thesaurus** to group similar terms together,
looking for the index entries that match the first term in the...

...creating a sub-list of all entries that match the first word. Some data
bases offer a **weighted** -term search wherein a score or **weight** for each
word being looked for gives each one a priority. The articles are then
ranked according to the combined score of the words it contains in
descending order. Fuzzy matching and selective dissemination are other
functions used in **search** procedures. An example of an inverted free-text
data base is included.

078349
New dictionary defines cyber-threats
Byline: Dorte Toft
Journal: Network World
Publication Date: October 01, 1999
Word Count: 593   Line Count: 54

Text:
The first official **dictionary** defining terms used to discuss computer
systems vulnerabilities has been released. It may be scary reading for...

... confusion arising from the fact that each of those bugs goes by many
different names, registered in **many** different **databases** by vendors and

security organizations, according to Peter Tasker, executive director of security and information at Mitre...

... engineering company based in Bedford, Mass., is the standard bearer of the Common Vulnerabilities and Exposures (CVE) **dictionary** and its electronic host (it is available at http://www.cve.mitre.org). Thus far the **dictionary** contains 321 entries, mostly bugs in operating systems such as in Windows NT, various Unix flavors and...
...vendor with most entries in CVE. While SANS' Northcutt says that the CVE will have an educational **influence** , its authors hope that at least one group doesn't learn too much from it. "We did...

... be accused of providing crackers with information. That is why we have limited it to being a **dictionary** , without cross references, without hyperlinks to where the problem is discussed in details," Tasker says. Mitre can...

26/3,K/31 **(Item 1 from file: 696)**
DIALOG(R)File 696:DIALOG Telecom. Newsletters
(c) 2003 The Dialog Corp. All rts. reserv.

00704702
Growth, Don't Fail Us Now
Telecoms & Wireless Asia
December 10, 1999 DOCUMENT TYPE: NEWSLETTER
PUBLISHER: PYRAMID RESEARCH
LANGUAGE: ENGLISH   WORD COUNT: 4018   RECORD TYPE: FULLTEXT

        (c) 1999 The Economist Intelligence Unit Ltd.

TEXT:
...hit the region at the most precisely opportune time. While "economic crisis" has been removed from their **vocabularies** , opcos throughout the region are looking for anything that will return them to the heady days of
...access -- a key platform for E-commerce -- will be limited.

Education and skills. Improving education standards should **rank** at the top of planners' priorities. The success of India's software industry reflects how investors will...cellular operators are rolling out data services as a premium. Short messaging services and transactional E-commerce **functions** -- bank account **queries** and stock purchases -- are already staples.
The next leap is from simple data services to slimmed-down...is to seize upon the Wideband CDMA (WCDMA) platform that it has championed into a position of **strength** in the region and elsewhere. Already the carrier has signed MOUs with many carriers in Asia and...

26/3,K/32 **(Item 1 from file: 636)**
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

03522703   Supplier Number: 47275450   (USE FORMAT 7 FOR FULLTEXT)
FULCRUM TECHNOLOGIES: Fulcrum announces Java Developers' Toolkit for rich,
  web-based search apps
M2 Presswire, pN/A
April 7, 1997
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 945

...   like searching using Boolean operators, as well as phrase, proximity and wildcard searching - along with more advanced **functionality** , such as **search** -term highlighting, relevance **ranking** , Intuitive Searching (Fulcrum's exclusive similarity searching feature), linguistic expansion, natural language searching, and an international **thesaurus** that supports all major European languages.

* Inherent security- Fulcrum SearchBuilder for Java benefits from the
security features...

   26/3,K/33   (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02683335   Supplier Number: 45442519 (USE FORMAT 7 FOR FULLTEXT)
**APPLICATIONS SPOTLIGHT: Airpower -- An Interactive History of Powered
   Flight**
Multimedia & Videodisc Monitor, v13, n4, pN/A
April, 1995
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 1398

...   data base. The next priority in the World War I treatment was to
create an infinitely expandable **data   base** with **multiple** entry points,
 search strategies, and tools for manipulating data -- with maximum use of
off-the-shelf software to minimize custom...

...Windows tie-ins for program architecture and video playback. The data
base uses a WAIS inverted index **search** engine with three distinct
interfaces for access. The first and default interface is an historically
oriented "Theatre...

...and subject header that parses the data base in real time. The second is
"Applesque" and allows **search** by title, author, article content, or
general index. The third interface permits bipolar relational concept
browsing. For example, the user could **search** the data base using the
concepts of morality and chivalry as they relate to the article on...

...von Richthofen, or training of French, English, German, and American
pilots for the war. In all cases, **searches** are machine-generated based on
the number of times selected key words appear in an article as...

...to article text and hits in the abstract count double. This feature lets
system administrators insert and **weight** core or meta concepts that do not
appear in article text but are nonetheless present. On the other hand,
machine- generated **searches** avoid the highly subjective and
labor-intensive process of manually assigning concepts to each article and
parametrically " **weighting** " them on a relative scale. "Airpower's"
relational data base is equipped with a full array of informational and
manipulative tools. Articles are supported by a **glossary** that explains
technical aviation terms, while a click on the "place" button brings up a
map relevant...

...of concept, program tutorials will be built using the "assemble" tool
and then imported into the information **section** of the main toolbar.
Project designers recognized creation as the highest form of understanding
and devoted considerable...

   26/3,K/34   (Item 3 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02162486   Supplier Number: 44058457 (USE FORMAT 7 FOR FULLTEXT)
Metal property database available
Coal & Synfuels Technology, v14, n33, pN/A
August 30, 1993
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 115

...   scientific and technical databases, recently added METALCREEP, a
numeric database of creep and rupture stress properties for **various**

metals.
    The **database** contains property information for 144 different metals.
That information includes creep rate, time, **strength** and strain; exposure
temperature and time; elongation at break; creep rupture **strength** ;
rupture life; and tensile yield **strength** or ultimate **strength** .
METALCREEP also contains high-temperature tensile properties for a wide
range of steels and aluminum alloys, as well as an on-line **thesaurus** .
    For more information, call Chemical Abstracts Service, 614-447-3600.
    COPYRIGHT 1993 BY PASHA PUBLICATIONS INC.

26/3,K/35   (Item 4 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01460880   Supplier Number: 41984747 (USE FORMAT 7 FOR FULLTEXT)
AMDAHL RESPONDS TO AD/CYCLE
Report on IBM, v8, n14, pN/A
April 3, 1991
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 1131

...   software management strategies at Gartner Group (Stamford, Conn.).
Huron is really an advanced 4GL with support for **many** **databases** . Percy
said the language looks good and the **dictionary** environment looks strong,
but Huron is still heavily **weighted** toward the mainframe environment.
    Early installations will be confined to systems running IBM's MVS
operating system...

26/3,K/36   (Item 5 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

01155982   Supplier Number: 40973361 (USE FORMAT 7 FOR FULLTEXT)
THE STATE OF PLAY IN THE WORLD OF IBM's DB2 - 2 THE BENEFITS OF RELEASE 2.2
Computergram International, n1278, pN/A
Oct 8, 1989
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1193

    (USE FORMAT 7 FOR FULLTEXT)
TEXT:
...are they? The answer is query speed and distributed database.Well, as
the entire world knows distributed **database** means **many** things to many
people, and most of them don't work. However on the query front, IBM...

...query. It has done this by using multiple index access paths or
multi-index searching.Imagine a **query** that wants to explore three
separate fields, dictating a maximum or minumum value to each and slim
down the records just to those that comply. It is the sort of **query**
function that relational databases seemed to be invented for, for instance
"Find me all the employees that have...

26/3,K/37   (Item 1 from file: 813)
DIALOG(R)File 813:PR Newswire
(c) 1999 PR Newswire Association Inc. All rts. reserv.

1067568   OT012
**Fulcrum Announces Java Developers' Toolkit for Rich, Web-Based Search
    Applications**

DATE: March 12, 1997   08:18 EST   WORD COUNT: 953

...like searching using Boolean operators, as well as phrase, proximity and

wildcard searching - along with more advanced **functionality** , such as **search** -term highlighting, relevance **ranking** , Intuitive Searching(TM) (Fulcrum's exclusive similarity searching feature), linguistic expansion, natural language searching, and an international **thesaurus** that supports all major European languages.

INHERENT SECURITY - Fulcrum SearchBuilder for Java benefits from the security features...

26/3,K/38   (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

06969271   Supplier Number: 58831224   (USE FORMAT 7 FOR FULLTEXT)
Risk management information resources listing.
Business Insurance, v34, p13
Jan 17, 2000
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 2113

   (USE FORMAT 7 FOR FULLTEXT)
TEXT: .
...and property damage caused by power plant explosions and fires, featuring a list of methods to building **effective** safety practices. **Request** item 1113 * A Self-Evaluation for Workplace Violence from Marsh Risk Consulting helps organizations prepare for such...

...Management designation program describes the contents of the class. Request item 1201 REINSURANCE * Gill & Roeser Inc.'s **Glossary** of Selected Reinsurance Terms covers the life/health and property/casualty insurance industries. Request item 1301 * A...

...item 1405 * Billing Notes outlines ICALM's criteria for understandable bills, serving as an example of cost- **effective** litigation management. **Request** item 1406 * ICALM Claim Audits lists questions one would ask when evaluating when and where to conduct...

26/3,K/39   (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

05401315   Supplier Number: 54555037   (USE FORMAT 7 FOR FULLTEXT)
·**So, tell us, what do you really, really want?**
Bird, Julie
Precision Marketing, p21(1)
April 14, 1997
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 2392

...   is not enshrined in legislation yet, but the argument for positive consent from the individual is gathering **strength** ." The mergers and takeovers taking place on the list supplier side are also having an impact upon...

...houses are not letting the grass grow under their feet either. Brenda Boardman, list brokerage director at **Lexicon** Marketing Services, believes this is good news for clients: "It shows that the industry is moving closer ...

...gives an organisation sales and marketing data when they need it, increasingly important as organisations adopt highly **segmented** relationship marketing models." The list market is evolving rapidly and this is no time for complacency - customers...sustain growth in the long term." Now that list buyers are a lot more clued up about **databases** ,

many of them are building their own. "There will be a trend for customers
to buy data for...

26/3,K/40   (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

04361033   Supplier Number: 46395858 (USE FORMAT 7 FOR FULLTEXT)
Softscape introduces Softscape Explorer Plus, powerful new "Desktop
  Information Manager"; Improves on Windows Explorer by integrating
  advanced search and retrieval with object-based file management.
Business Wire, p5201056
May 20, 1996
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1162

...   of the advanced searching features of the Topic engine, including
automatic search expansion using an on-line **thesaurus** , case matching and
"sounds like" **functionality** , ensuring that **search** results are
comprehensive and **ranked** by relevancy. Also inherited from Topic is the
highest level of performance available -- QuickFind can search for...

26/3,K/41   (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

02010362   Supplier Number: 42581344 (USE FORMAT 7 FOR FULLTEXT)
Gupta Preps SQLBase NLM
CommunicationsWeek, p1
Dec 9, 1991
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 753

...   features discussed in August, which the CTA's Saks said apparently
have been implemented, included support for **databases   partitioned**
across **multiple** disk drives or servers, faster and more **efficient**
database **queries** , and maintenance of data integrity during accesses and
manipulations by multiple users.
    All versions of SQLBase Server...

26/3,K/42   (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

00894180
Personal computers will be the spokes of the corporate information system
    to answer the computing needs of individual users, according to DB
    Holden, DIgital Equipment Corp (Stow, MA).
Computerworld   March 21, 1983   p. D1-ID61

    While personal computers cannot be controlled the way large systems
have been, the information systems manager can **influence** and coordinate
personal computer use by providing users with support in 2 key areas, viz,
education and...

... software tools and languages. However, the wide popularity of personal
computers has led to the development of **many** fragmented **data   bases**
and unintegrated office information systems. To realize the benefits of
personal computers while reducing the potential risks...

...efficiently large amounts of information. However, a more traditional DP
approach is to create a common data **dictionary** and file structure between
the data distribution system that contains the extracted corporate data and

the personal...

```
Set      Items     Description
S1      490932     QUER? OR SEARCH? OR REQUEST?
S2        9006     (PLURAL? OR VARIOUS OR SEVERAL OR MULTIPL? OR MANY OR NUME-
                    ROUS OR UNLIMITED)(2N)(DATA()BASE? OR DATABASE?)
S3       67050     DICTIONAR? OR GLOSSAR? OR LEXICON? OR VOCABULAR? OR THESAU-
                    RUS
S4      2485671    STRENGTH OR WEIGHT? OR SIGNIFICANCE OR INFLUENCE OR IMPORT-
                    ANCE OR RANK?
S5      416265     DATABASE? OR DATA()BASE?
S6     1334139     PARTITION? OR PARSE OR PARSING OR SPLIT? OR DIVIDE? OR SEC-
                    TION? OR SEGMENT? OR SEPARATE? (5N) S1
S7       22660     (OPTIMIZ? OR PERFECT? OR FUNCTION? OR EFFECTIVE? OR EFFICI-
                    ENT?)(2N)S1
S8        5255     S3 AND S4
S9         591     S6 AND S2
S10         36     S9 AND S7
S11         17     S9 AND S3
S12         71     S9 AND S4
S13        301     S2 AND S3
S14         68     S8 AND S7
S15       5255     S8 AND S4
S16       5255     S15 AND S3
S17       3266     S1 AND S2
S18         21     S8 AND S17
S19         21     S1 AND S2 AND S3 AND S4
S20        183     S17 AND S3
S21        200     S17 AND S4
S22         18     S20 AND S7
S23         24     S21 AND S7
S24        104     S10 OR S11 OR S18 OR S19 OR S22 OR S23
S25         52     S24 AND S6
S26         51     S25 NOT PY>2001
S27         51     S26 NOT PD>20010228
S28         43     RD (unique items)
File    8:Ei Compendex(R) 1970-2003/Nov W5
          (c) 2003 Elsevier Eng.  Info. Inc.
File   35:Dissertation Abs Online 1861-2003/Oct
          (c) 2003 ProQuest Info&Learning
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          (c) 2003 BLDSC all rts. reserv.
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          (c) 2003 Institution of Electrical Engineers
File  233:Internet & Personal Comp. Abs. 1981-2003/Jul
          (c) 2003, EBSCO Pub.
File   94:JICST-EPlus 1985-2003/Dec W1
          (c)2003 Japan Science and Tech Corp(JST)
File   99:Wilson Appl. Sci & Tech Abs 1983-2003/Oct
          (c) 2003 The HW Wilson Co.
File   95:TEME-Technology & Management 1989-2003/Nov W4
          (c) 2003 FIZ TECHNIK
File  583:Gale Group Globalbase(TM) 1986-2002/Dec 13
          (c) 2002 The Gale Group
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28/5/2   (Item 2 from file: 8)
DIALOG(R)File   8:Ei Compendex(R)
(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

05719244   E.I. No: EIP00125426260
   Title: **Restructuring** partitioned **normal form relations without**
information loss
   Author: Vincent, Millist W.; Levene, Mark
   Corporate Source: Univ of South Australia, Adelaide, Australia
   Source: SIAM Journal on Computing v 29 n 5 2000. p 1550-1567
   Publication Year: 2000
   CODEN: SMJCAT   ISSN: 0097-5397
   Language: English
   Document Type: JA; (Journal Article)   Treatment: T; (Theoretical)
   Journal Announcement: 0101W3

   Abstract: Nested relations in **partitioned** normal form (PNF) are an
important subclass of nested relations that are useful in many
applications. In this paper we address the question of determining when
every PNF relation stored under one nested relation scheme can be
transformed into another PNF relation stored under a different nested
relation scheme without loss of information, referred to as the two schemes
being data equivalent. This issue is important in **many database**
application areas such as view processing, schema integration, and schema
evolution. The main result of the paper provides two characterizations of
data equivalence for nested schemes. The first is that two schemes are data
equivalent if and only if the two sets of multivalued dependencies induced
by the two corresponding scheme trees are equivalent. The second is that
the schemes are equivalent if and only if the corresponding scheme trees
can be transformed into the other by a sequence of applications of a local
restructuring operator and its inverse. (Author abstract) 29 Refs.
   Descriptors: Relational database systems; **Query** languages;
Optimization ; User interfaces
   Identifiers: Nest
   Classification Codes:
   723.1.1 (Computer Programming Languages)
   723.3 (Database Systems); 723.1 (Computer Programming); 921.5
(Optimization Techniques); 722.2 (Computer Peripheral Equipment)
   723 (Computer Software); 921 (Applied Mathematics); 722 (Computer
Hardware)
   72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

28/5/3   (Item 3 from file: 8)
DIALOG(R)File   8:Ei Compendex(R)
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05484003   E.I. No: EIP00025039026
   Title: Influence **of data set** splitting **methods on similarity indexing**
performance
   Author: Bai, Xuesheng; Xu, Guangyou; Shi, Yuanchun; Yang, Shiqiang
   Corporate Source: Tsinghua Univ, Beijing, China
   Conference Title: Proceedings of the 2000 'Storage and Retrieval for
Media Databases 2000'
   Conference   Location: San   Jose,   CA,   USA   Conference   Date:
19000126-19000128
   Sponsor: IS and T; SPIE
   E.I. Conference No.: 56354
   Source: Proceedings of SPIE - The International Society for Optical
Engineering v 3972 2000. p 76-83
   Publication Year: 2000
   CODEN: PSISDG   ISSN: 0277-786X
   Language: English
   Document Type: JA; (Journal Article)   Treatment: T; (Theoretical)
   Journal Announcement: 0004W1
   Abstract: Similarity indexing is the supporting technology for fast
content-based retrieval of large media **databases** , and **many** similarity
index structures have been proposed. Compared with the many structures

present, less attention has been paid to performance evaluation of index
structures and theoretic analysis on factors influencing index performance.
In this paper, we attempt to solve part of the problem and focus our
research on analyzing the **influence** of data **splitting** methods.. To give
a formal definition for index structure performance evaluation, we
introduce the **query** distribution probability concept and propose using
average **search** cost to evaluate the performance of a similarity indexing
structure. We choose the simplest case of similarity indexing –
nearest-neighbor **search** in our discussion and deduce an expression for
the average **search** cost **function** . Based on analysis of the expression,
we proposed some criteria that may be useful in index design and
implementation. Then we extend these conclusions to the general similarity
indexing case and use these criteria as general rules in index design and
implementation. Basic thoughts and analysis are detailed, as well as
experiment results. (Author abstract) 12 Refs.

   Descriptors: *Indexing (of information); Database systems; Multimedia
systems; Information retrieval; Data structures; Probability distributions;
Data reduction; Response time (computer systems); Computer systems
programming
   Identifiers: Data set **splitting** methods; Similarity indexing; **Query**
distribution probability
   Classification Codes:
   903.1 (Information Sources & Analysis); 723.3 (Database Systems); 723.5
  (Computer Applications); 903.3 (Information Retrieval & Use); 723.2
(Data Processing); 922.1 (Probability Theory)
   903 (Information Science); 723 (Computer Software); 922 (Statistical
Methods)
   90 (GENERAL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 92
(ENGINEERING MATHEMATICS)

   28/5/4   (Item 4 from file: 8)
DIALOG(R)File   8:Ei Compendex(R)
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05085926   E.I. No: EIP98084331475
   Title: **Graph-based parallel** query **processing and** optimization
strategies for object-oriented databases
   Author: Su, Stanley Y.W.; Huang, Ying; Akaboshi, Naoki
   Corporate Source: Univ of Florida, Gainesville, FL, USA
   Source: Distributed and Parallel Databases v 6 n 3 Jul 1998. p 247-285
   Publication Year: 1998
   CODEN: DAATES   ISSN: 0926-8782
   Language: English
   Document Type: JA; (Journal Article)   Treatment: A; (Applications); T;
(Theoretical)
   Journal Announcement: 9810W1
   Abstract: Much work has been accomplished in the past on the subject of
parallel **query** processing and **optimization** in parallel relational
database systems; however, little work on the same subject has been done in
parallel object-oriented database systems. Since the object-oriented view
of a database and its processing are quite different from those of a
relational system, it can be expected that techniques of parallel **query**
processing and **optimization** for the latter can be different from the
former. In this paper, we present a general framework for parallel
object-oriented **database** systems and **several** implemented **query**
processing and **optimization** strategies together with some performance
evaluation results. In this work, multiwavefront algorithms are used in
query processing to allow a higher degree of parallelism than the
traditional tree-based **query** processing. Four **optimization** strategies,
which are designed specifically for the multiwavefront algorithms and for
the optimization of single as well as multiple queries, are introduced. The
query processing algorithms and optimization strategies have been
implemented on a parallel computer, nCUBE2; and the results of a
performance evaluation are presented in this paper. The main emphases and
the intended contributions of this paper are (1) data **partitioning** ,
query processing and **optimization** strategies suitable for parallel

OODBMSs, (2) the implementation of the multiwavefront algorithms and optimization strategies, and (3) the performance evaluation results. (Author abstract) 54 Refs.

Descriptors: *Database systems; Object oriented programming; Parallel processing systems; Parallel algorithms; Optimization; Graph theory; Performance

Identifiers: Parallel object oriented database systems; Query processing algorithm; Multiwavefront algorithm

Classification Codes:

723.3 (Database Systems); 723.1 (Computer Programming); 722.4 (Digital Computers & Systems); 921.5 (Optimization Techniques); 921.4 (Combinatorial Mathematics, Includes Graph Theory, Set Theory)

723 (Computer Software); 722 (Computer Hardware); 921 (Applied Mathematics)

72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

28/5/6   (Item 6 from file: 8)

Title: **Survey of parallel execution strategies for transitive closure and logic programs**
Author: Cacace, Filippo; Ceri, Stefano; Houtsma, Maurice
Corporate Source: Politecnico di Milano, Milano, Italy

Abstract: An important feature of database technology of the nineties is the use of parallelism for speeding up the execution of complex queries. This technology is being tested in **several** experimental **database** architectures and a few commercial systems for conventional select-project-join queries. In particular, hash-based fragmentation is used to distribute data to disks under the control of different processors in order to perform selections and joins in parallel. With the development of new query languages, and in particular with the definition of transitive closure queries and of more general logic programming queries, the new dimension of recursion has been added to query processing. Recursive queries are complex; at the same time, their regular structure is particularly suited for parallel execution, and parallelism may give a high efficiency gain. We survey the approaches to parallel execution of recursion queries that have been presented in the recent literature. We observe that research on parallel execution of recursive **queries** is **separated** into two distinct subareas, one focused on the transitive closure of Relational Algebra expressions, the other one focused on optimization of more general Datalog queries. Though the subareas seem radically different because of the approach and formalism used, they have many common features. This is not surprising, because most typical Datalog queries can be solved by means of the transitive closure of simple algebraic expressions. We first analyze the relationship between the transitive closure of expressions in Relational Algebra and Datalog programs. We then review sequential methods for evaluating transitive closure, distinguishing iterative and direct methods. We address the parallelization of these methods, by discussing various forms of parallelization. Data fragmentation plays an important role in obtaining parallel execution; we describe hash-based and semantic fragmentation. Finally, we consider Datalog queries, and present general methods for parallel rule execution; we recognize the similarities between these methods and the methods reviewed previously, when the former are applied to linear Datalog queries. We also provide a quantitative analysis that shows the impact of the initial data distribution on the performance of methods. (Author abstract) 68 Refs.

Descriptors: *Relational database systems; Parallel processing systems;
Logic programming; Query languages; Data transfer; Boolean algebra;
Recursive functions; Algorithms; Optimization; Program processors
   Identifiers: Parallel algorithms; Transitive closure; Logic programs;
Datalog programs; Query processing; Hash based fragmentation; **Query
optimization** ; Recursion; Deductive databases; Relational algebra
   Classification Codes:
   723.2 (Data Processing); 723.1 (Computer Programming); 921.1 (Algebra)
; 721.1 (Computer Theory, Includes Formal Logic, Automata Theory,
Switching Theory, Programming Theory); 722.4 (Digital Computers & Systems)
   723 (Computer Software); 921 (Applied Mathematics); 721 (Computer
Circuits & Logic Elements); 722 (Computer Hardware)
   72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

   28/5/7   (Item 7 from file: 8)

03622365   E.I. No: EIP93020715014
   Title: **Semantic** query **processing in multidatabase systems: a
logic-based approach**
   Author: Pan, Miin-Jeng; Chang, Shi-Kuo; Yang, Chien-Chiao
   Corporate Source: Natl Taiwan Inst of Technology, Taiwan
   Conference Title: Proceedings of the Third Workshop on Future Trends of
Distributed Computing Systems
   Conference Location: Taipei, Taiwan   Conference Date: 19910414
   Sponsor: IEEE
   E.I. Conference No.: 17752
   Source: Proceedings of the Third Workshop on Future Trends of Distributed
Computing Systems Proc Third Workshop Future Trends Distrib Comput Syst
1992. Publ by IEEE, Computer Society, Los Alamitos, CA, USA. p 318-324
   Publication Year: 1992
   ISBN: 0-8186-2755-7
   Language: English
   Document Type: CA; (Conference Article) Treatment: T; (Theoretical)
   Journal Announcement: 9306W3
   Abstract: A multidatabase system (MDBS) is a system that integrates the
operational data of **several** autonomous **database** systems and provide a
uniform interface and control mechanisms to control access to those data.
To efficiently retrieve and manipulate the data stored in MDBS, a metadata
dictionary is needed as a repository of essential information for
reasoning, controlling, and maintaining the retrieval/manipulation
processes. In this paper we developed a two-level active metadata
dictionary approach based on logic for building a metadata **dictionary** ,
query processing, and maintenance in MDBS. The low-level metadata
dictionaries (LLMDs) keep metadata for each corresponding local database
in MDBS, respectively. The high-level metadata **dictionary** (HLMD)
integrates the metadata about all LLMDs. The evaluation strategy is a
top-down approach, start with consideration of a **query** as a global goal
to be achieved. Unify the **query** with rules successively to decompose the
goal into subgoals which can be evaluated against extensional database.
Then translate these subgoals into corresponding **queries** against
underlying DBMSs, respectively. The database integration strategy includes
two phases: schema translation and schema integration. It is a bottom-up
approach integrating schema from the underlying database schemas. Update
may cause inconsistencies in MDBS. We use incremental integrity constraint
checking to preserve consistency. The semantic **query   optimization**
evaluation can be **partitioned** into two phases: compilation phase and
evaluation phase. During the compilation phase residues are computed and
associated with deductive rules through partial subsumption algorithm. In
evaluation phase, redundant residues are eliminated and then translate it
into **query** against underlying DBMS. (Author abstract) Refs.
   Descriptors: *Distributed database systems; Algorithms
   Identifiers: **Query** processing; **Dictionaries** ; Semantic **query**
processing; Multidatabase systems; Metadata **dictionaries** ; Integrity
constraint checking; **Query   optimization**

Classification Codes:
723.3 (Database Systems); 723.1   (Computer Programming)
723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING)

 28/5/8   (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
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01888101 ORDER NO: AADAA-IMQ68268
Distributed FASTA searching on a server network
  Author: Peng, Jian
  Degree: M.C.S.
  Year: 2001
  Corporate Source/Institution: The University of New Brunswick (Canada) (
          0823)
  Adviser: Patricia Evans
  Source: VOLUME 40/06 of MASTERS ABSTRACTS.
          PAGE 1553.   130 PAGES
  Descriptors: COMPUTER SCIENCE
  Descriptor Codes: 0984
  ISBN: 0-612-68268-4

     DNA/protein sequence comparison, usually organized as a database
search, is a very powerful tool in modern molecular biology. In recent
years, the rapid growth of sequence databases in their size as well as in
their number poses demands for **efficient** programs to **search** these
databases. In this thesis a distributed system capable of performing
sequence searches on **multiple** biological **databases** simultaneously has
been designed, implemented and tested.
     The two-phase nature of FASTA algorithm makes it the algorithm of the
choice to be modified for our distributed system. The system is built on a
three-tier architecture to support a flexible, expendable, and most
importantly, user transparent server network. The system is capable of
searching multiple homogeneous and heterogeneous databases in a single
query. Also, it can handle concurrent multiple client connections.
     In summary, the work accomplished in this thesis has demonstrated that
the performance of sequence queries on **multiple** biological **databases**
can be significantly improved if a distributed algorithm is used, compared
to running uncoordinated parallel searches on these individual databases.
It also shows that the usability of existing biological databases and
database search programs can be greatly enhanced if **multiple   databases**
can be queried simultaneously, as one logical database, because users
obtain the search results in one compiled report, which is not available if
they run the **searches   separately** on individual databases. Moreover,
this thesis demonstrates that the Client/Server computing model used in
biological database queries can greatly expand the possibilities to build a
centralized biological data warehouse to facilitate multiple remote client
requests through the Internet.

 28/5/9   (Item 2 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
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01847279 ORDER NO: AADAA-I3024413
Efficient retrieval and scalable storage of multi-dimensional data
  Author: Ferhatosmanoglu, Hakan
  Degree: Ph.D.
  Year: 2001
  Corporate Source/Institution: University of California, Santa Barbara (
          0035)
  Chairs: Divyakant Agrawal; Amr El Abbadi
  Source: VOLUME 62/08-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
          PAGE 3687.   235 PAGES
  Descriptors: COMPUTER SCIENCE

Databases increasingly integrate different types of information such as multimedia data. As a result, it is becoming necessary to support efficient storage and retrieval of multi-dimensional data. In **several** modern **database** applications, both the dimensionality and the amount of data that needs to be processed are increasing rapidly. Therefore, it is important to develop techniques that overcome the scalability and the dimensionality problems of multi-dimensional data sets. Since the amount of data is large, it is crucial to develop techniques that exploit parallelism in large-scale databases. In this context, we propose **partitioning** and declustering techniques for multi-disk architectures. Several effective solutions for the high dimensionality problem are also proposed: access structures for **efficient searching** , and dimensionality reduction techniques to remove the curse of dimensionality. In particular, we propose a compression based index structure, a clustering based approximate search technique, and a dimensionality reduction technique using inner product approximations. Finally, we discuss two new types of **queries** and propose **efficient** techniques to process them. Extensive experimental evaluation of all presented techniques has been performed and comparison with other state-of-the-art approaches is presented.

Indexing techniques for similarity searches in sequence databases

Similarity searches in sequence databases are important in many application domains such as information retrieval, data mining, and clustering. Although sequential scanning can be used to perform similarity searches, it may require enormous processing time over large sequence **databases** . Recently, **several** indexing techniques have been proposed to speed up the processing of similarity searches.

Most of the previous techniques use the Euclidean distance metric as a similarity measure. However, in many applications, the sampling rates and the lengths of sequences may be different, making it difficult or impossible to use the Euclidean distance metric. In the area of speech recognition, this problem has been approached using the similarity measure, called the time warping distance, which allows sequences to be stretched or compressed along the time axis.

In this dissertation, we investigate a set of indexing techniques for the fast retrieval of similar (sub)sequences of different lengths or different sampling rates. The goal of our approach is to achieve the high search performance without missing any qualified answers.

We first propose a whole sequence searching method, which extracts a time-warping invariant feature vector from each sequence and uses a lower-bound time warping distance function to compute the distance of any two feature vectors. The proposed method **efficiently** performs similarity **search** using a multi-dimensional index built on the set of feature vectors.

We then propose a subsequence searching method, which uses a disk-based suffix tree as an index structure and employs lower-bound time

warping distance functions to filter out dissimilar subsequences. To make
the index structure compact and thus accelerate the query processing, the
proposed method introduces the categorization and sparse indexing schemes.

For a database with long data sequences, we propose a **segment** -based
subsequence searching scheme which changes the similarity measure from time
warping to piece-wise time warping in order to reduce the number of
possible subsequences to be compared. For a database with multi-dimensional
data sequences such as image sequences and video streams, we extend the
proposed techniques by introducing the multi-dimensional time warping
distance function. Finally, we apply the proposed subsequence searching
techniques to the problem of discovering and matching sequential
association rules.

28/5/12   (Item 5 from file: 35)
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01700275 ORDER NO: AAD99-28158
**DEVELOPING TECHNIQUES FOR ENHANCING COMPREHENSIBILITY OF CONTROLLED MEDICAL
TERMINOLOGIES (OBJECT ORIENTED DATABASES,** PARTITIONING)
    Author: GU, HUANYING
    Degree: PH.D.
    Year: 1999
    Corporate Source/Institution: NEW JERSEY INSTITUTE OF TECHNOLOGY (0152)
    Adviser: JAMES GELLER
    Source: VOLUME 60/04-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
            PAGE 1702. 179 PAGES
    Descriptors: COMPUTER SCIENCE ; EDUCATION, HEALTH
    Descriptor Codes: 0984; 0680

A controlled medical terminology (CMT) is a collection of concepts (or
terms) that are used in the medical domain. Typically, a CMT also contains
attributes of those concepts and/or relationships between those concepts.
Electronic CMTs are extremely useful and important for communication
between and integration of independent information systems in healthcare,
because data in this area is highly fragmented. A single query in this area
might involve **several   databases** , e.g., a clinical database, a pharmacy
database, a radiology database, and a lab test database.

Unfortunately, the extensive sizes of CMTs, often containing tens of
thousands of concepts and hundreds of thousands of relationships between
pairs of those concepts, impose steep learning curves for new users of such
CMTs. In this dissertation, we address the problem of helping a user to
orient himself in an existing large CMT. In order to help a user comprehend
a large, complex CMT, we need to provide abstract views of the CMT.
However, at this time, no tools exist for providing a user with such
abstract views. One reason for the lack of tools is the absence of a good
theory on how to **partition** an overwhelming CMT into manageable pieces.

In this dissertation, we try to overcome the described problem by
using a three-pronged approach. (1) We use the power of
Object-Oriented Databases to design a schema extraction process for large,
complex CMTs. The schema resulting from this process provides an excellent,
compact representation of the CMT. (2) We develop a theory and a
methodology for **partitioning** a large OODB schema, modeled as a graph,
into small <italic>meaningful</italic> units. The methodology relies on the
interaction between a human and a computer, making optimal use of the
human's semantic knowledge and the computer's speed. Furthermore, the
theory and methodology developed for the schema-level **partitioning** are
also adapted to the object-level of a CMT. (3) We use purely <italic>
structural similarities</italic> for **partitioning** CMTs, eliminating the
need for a human expert in the **partitioning** methodology mentioned above.

Two large medical terminologies are used as our test beds, the Medical
Entities **Dictionary** (MED) and the Unified Medical Language System (UMLS),
which itself contains a number of terminologies.

28/5/13   (Item 6 from file: 35)

01681364   ORDER NO: AAD99-13888
**AN INTELLIGENT CACHE MANAGER IN DATA WAREHOUSING ENVIRONMENT AND ITS
APPLICATION TO THE WEB CACHING (WORLD WIDE WEB)**
   Author: SHIM, JUNHO
   Degree: PH.D.
   Year: 1998
   Corporate Source/Institution: NORTHWESTERN UNIVERSITY (0163)
   Adviser: PETER SCHEUERMANN
   Source: VOLUME 59/12-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
            PAGE 6385. 106 PAGES
   Descriptors: COMPUTER SCIENCE
   Descriptor Codes: 0984

     A data warehouse is a stand-alone repository of information consisting
of “interesting” and “historic” data from **several**
, heterogeneous, operational **databases** , and the size of data warehouse is
very large and grows over time. Data warehouses are usually dedicated to
the processing of queries issued by decision support systems (DSS). The
response time of DSS queries is typically several orders of magnitude
higher than the response time of OLTP (OnLine Transaction Processing)
queries. Since DSS queries are often submitted interactively, techniques
for reducing their response time are important.
     The caching of query results is one such technique particularly well
suited to the DSS environment. In this thesis, we present an intelligent
cache manager for such an environment. The cache manager can lookup queries
either based on an exact query match or using a <italic>query **split**
</italic> algorithm to **efficiently** find **query** results which subsume the
submitted query. The cache manager dynamically maintains the cache content
by deciding whether a new query result should be admitted to the cache and
if so, which query results should be evicted from the cache. The decisions
are aimed at minimizing query response time. The decisions are based on the
execution cost of each query, the size of each query result, the reference
frequency to each result, the cost of maintenance of each result due to
updates of the base tables, and the frequency of updates. Experimental
evaluation shows that the manager can significantly improve performance
when compared to similar systems.
     Since Web documents vary in their size, and the cost of their
materialization depends upon the network delays, a profit based cache
replacement algorithm can be applied to Web caching. At the same time, the
cache must guarantee some form of consistency of the cached documents.
Cache consistency algorithms enforce appropriate guarantees about the
staleness of the cached documents. We have developed a unified cache
maintenance algorithm which integrates both cache replacement and
consistency algorithms. A trace-driven experimental study shows that the
unified algorithm not only improves the average response time but also
reduces the significant number of stale documents returned to the clients.

 28/5/14   (Item 7 from file: 35)

01598687   ORDER NO: AAD98-00472
**NETRA: A TOOLBOX FOR NAVIGATING LARGE IMAGE DATABASES   (INFORMATION
EXTRACTION, IMAGE RETRIEVAL)**
   Author: MA , WEI-YING
   Degree: PH.D.
   Year: 1997
   Corporate Source/Institution: UNIVERSITY OF CALIFORNIA, SANTA BARBARA (
            0035)
   Chairperson: B. S. MANJUNATH
   Source: VOLUME 58/07-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
            PAGE 3830. 158 PAGES
   Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL ; COMPUTER SCIENCE

Recent technological advances have made it possible to process and store large amounts of image/video data. Perhaps the most impressive example is the fast accumulation of image data in scientific applications such as medical and satellite imagery. The internet is another excellent example of a distributed **database** containing **several** millions of images. However, in order to realize their full potential, tools for automated analysis and extraction of information, and for intelligent searches in image databases need to be developed.

We have investigated various techniques which facilitate content-based image search and retrieval. A prototype system, called NETRA, which enables the search of aerial photographs and natural color images has been implemented on the web using the platform independent Java language. A distinguishing aspect of this system is its incorporation of a robust automated image **segmentation** algorithm that allows object or region based search. Image **segmentation** significantly improves the quality of image retrieval when images contain multiple complex objects. Images are **segmented** into homogeneous regions at the time of ingest into the database, and image attributes that represent each of these regions are computed. This is the first time that image **segmentation** and region based search have been combined in a robust way and retrieval performance demonstrated on a large image database.

In addition to image **segmentation** , other important components of the system include feature representations for characterizing the color, texture, and shape information, an approach to enhancing the retrieval performance by learning the appropriate similarity measures in the image feature space, and an image **thesaurus** model for image annotation and indexing. NETRA allows users to search by image example. For instance, the user can retrieve all images containing "blue sky" by specifying the color (blue) and location (upper one-third) information. Images containing snow covered peaks can be specified by selecting an example from the database and choosing color and texture attributes for search. NETRA can be accessed on the web at "http://vivaldi.ece.ucsb.edu/Netra."

28/5/15   (Item 8 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online
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01566823 ORDER NO: AAD97-23169
QUERY PROCESSING IN TERTIARY MEMORY DATABASES
   Author: SARAWAGI, SUNITA
   Degree: PH.D.
   Year: 1996
   Corporate Source/Institution: UNIVERSITY OF CALIFORNIA, BERKELEY (0028)
   Chair: MICHAEL R. STONEBRAKER
   Source: VOLUME 58/02-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
            PAGE 811. 126 PAGES
   Descriptors: COMPUTER SCIENCE
   Descriptor Codes: 0984

This thesis presents the design and implementation of a database query processing engine that is optimized for access to tertiary memory devices. Tertiary memory devices provide a cost-effective solution for handling the on-going information explosion. While cheap and convenient, they pose new optimization challenges. Not only are tertiary devices three orders of magnitude slower than disks, but they also have a highly non-uniform access latency. Therefore, it is crucial to carefully reduce and reorder I/O on tertiary memory using **effective   query** scheduling, batching, caching, prefetching and data placement techniques.

We make two key modifications to an existing query processing architecture to support such aggressive optimizations: The first is a scheduler that uses system-wide information to make query scheduling, caching and device scheduling decisions in an integrated manner. The second is a reorderable executor that can process each query plan in the order in

which data is made available by the scheduler rather than demand and process data in a fixed order, as in most conventional query execution engines. The two together provide unprecedented opportunities for optimizing accesses to tertiary memory. We have extended the scPOSTGRES database system with these optimizations. Measurements on the prototype yielded almost an order of magnitude improvement on the scSEQUOIA-2000 benchmark and on queries over synthetic datasets.

We explore data placement techniques on tertiary memory devices to enable better clustering. This thesis concentrates on data placement issues for large multidimensional arrays--one of the largest contributors of data volume in **many database** systems. We discuss four techniques for doing this: (1) storing the array in multidimensional "chunks" to minimize the number of blocks fetched, (2) reordering the chunked array to minimize seek distance between accessed blocks, (3) maintaining redundant copies of the array, each organized for a different chunk size and ordering and (4) **partitioning** the array onto platters of a tertiary memory device so as to minimize the number of platter switches. Measurements on data obtained from global change scientists show that accesses on arrays organized using these techniques are often an order of magnitude faster than on the unoptimized data.

01538965 ORDER NO: AAD97-13439
DATA ALLOCATION AND QUERY OPTIMIZATION **IN LARGE SCALE DISTRIBUTED DATABASES (DATA PROCESSING)**
  Author: ZHOU, ZEHAI
  Degree: PH.D.
  Year: 1996
  Corporate Source/Institution: THE UNIVERSITY OF ARIZONA (0009)
  Director: OLIVIA R. LIU SHENG
  Source: VOLUME 57/11-A OF DISSERTATION ABSTRACTS INTERNATIONAL.
           PAGE 4829. 161 PAGES
  Descriptors: BUSINESS ADMINISTRATION, MANAGEMENT ; COMPUTER SCIENCE
  Descriptor Codes: 0454; 0984

    Distributed database technology is expected to have a significant impact on data processing in the upcoming years because distributed **database** systems have **many** potential advantages over centralized systems for geographically distributed organizations. Data allocation and **query optimization** are two of the most important aspects of distributed database design. Data allocation involves placing a database and the applications that run against it in the multiple sites of a network. It is a very complex problem consisting of two processes: data fragmentation and fragment allocation. Data fragmentation involves the **partitioning** of each relation into a group of fragment relations while fragment allocation deals with the distribution of these fragmented relations across the sites of the distributed system. **Query optimization** includes designing algorithms that analyze and convert queries into a set of data manipulation operations. Both the data allocation and **query optimization** problems are NP-hard in nature and notoriously difficult to solve. We have attempted to combine the two highly interrelated and interactive decision processes in data allocation by formulating them as integer programs taking into consideration different constraints and under various assumptions. Various solution methods are discussed and a new linearization method is investigated. We next analyze the **query optimization** problem and reduce it to a join ordering problem. Several heuristics and a genetic algorithm have been developed for solving the join ordering problem. Some computational experiments on these algorithms were conducted and solution qualities compared. The computation experiments show that the suggested linearization method performs clearly and consistently better than a currently widely used method and that heuristics and genetic algorithms are viable methods for solving **query optimization** problem.
    It is anticipated that the models and solution methods developed in

this study for data allocation and **query** **optimization** in distributed
database systems may be of practical as well as theoretical use.
Nevertheless, much more needs to be done to solve the distributed database
design problems in order to achieve its potential benefits. Our models and
solution methods can be the starting point for eventual resolution of these
complex problems in large scale distributed database systems.

28/5/17   (Item 10 from file: 35)
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01529455 ORDER NO: AAD97-03547
DATA PARTITIONING , QUERY **PROCESSING AND** OPTIMIZATION **TECHNIQUES FOR**
PARALLEL OBJECT-ORIENTED DATABASES (RELATIONAL DATABASES)
    Author: HUANG, YING
    Degree: PH.D.
    Year: 1996
    Corporate Source/Institution: UNIVERSITY OF FLORIDA (0070)
    Chairman: STANLEY Y. W. SU
    Source: VOLUME 57/09-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
          PAGE 5750. 95 PAGES
    Descriptors: COMPUTER SCIENCE ; ENGINEERING, ELECTRONICS AND ELECTRICAL
    Descriptor Codes: 0984; 0544

    Much work has been accomplished in the past on the subject of parallel
 query processing and **optimization** in parallel relational database
systems. However, little work on the same subject has been done in parallel
object-oriented database systems. Since the object-oriented view of a
database and its processing are quite different from those of a relational
system, it can be expected that techniques of parallel **query** processing
and **optimization** for the latter can be different from the former. In this
dissertation, we present two parallel architectures, a general framework
for parallel object-oriented **database** systems, **several** implemented
query processing and **optimization** strategies together with some
performance evaluation results. In this work, multi-wavefront algorithms
are used in query processing to allow a higher degree of parallelism than
the traditional tree-based **query** processing. Four **optimization**
strategies, which are designed specifically for the multi-wavefront
algorithms and for the optimization of single as well as multiple queries,
are introduced and evaluated. A distributed result collection scheme which
is designed to support retrieval queries is also introduced. Furthermore,
two parallel architectures, namely, master-slave and peer-to-peer
architectures are compared. A comparison is also made for two data
placement strategies, namely, class-per-node vertical **partitioning** and
hybrid **partitioning** . The query processing algorithms, four optimization
strategies and the distributed result collection scheme have been
implemented on a parallel computer nCUBE2, and the results of a performance
evaluation are presented in this dissertation. The main emphases and the
intended contributions of this dissertation are (1) data **partitioning** ,
parallel architecture, **query** processing, **query** **optimization** and
result collection strategies suitable for parallel OODBMSs; (2) the
implementation of these strategies; and (3) the performance evaluation
results.

28/5/18   (Item 11 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online
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01509763 ORDER NO: AADNN-09345
EXACT POSITIONING OF DATA APPROACH TO MEMORY MAPPED PERSISTENT STORES:
DESIGN, ANALYSIS AND MODELLING (SECONDARY STORAGE)
    Author: GOEL, ANIL K.
    Degree: PH.D.
    Year: 1996
    Corporate Source/Institution: UNIVERSITY OF WATERLOO (CANADA) (1141)

     One of the primary functions of computers is to store information,
i.e., to deal with long lived or persistent data. Programmers working with
persistent data structures are faced with the problem that there are two,
mostly incompatible, views of structured data, namely data in primary and
secondary storage. Traditionally, these two views of data have been dealt
with independently by researchers in the programming language and database
communities.
     Significant research has occurred over the last decade on efficient
and easy-to-use methods for manipulating persistent data structures in a
fashion that makes the secondary storage transparent to the programmer.
Merging primary and secondary storage in this manner produces a
single-level store, which gives the illusion that data on secondary storage
is accessible in the same way as data in primary storage. In complex design
environments, a single-level store offers substantial performance
advantages over conventional file or database access. These advantages are
crucial to unconventional database applications such as computer-aided
design, text management, and geographical information systems. In addition,
a single-level store reduces complexity in a program by freeing the
programmer from the responsibility of dealing with two views of data.
     This dissertation proposes, develops and investigates a novel approach
for implementing single-level stores using memory mapping. Memory mapping
is the use of virtual memory to map data stored on secondary storage into
primary storage so that the data is directly accessible by the processor's
instructions. In this environment, all transfer of data to and from the
secondary store takes place implicitly during program execution. The
methodology was motivated by the significant simplification in expressing
complex data structures offered by the technique of memory mapping. This
work parallels other proposals that exploit the potential of memory
mapping, but develops a unique approach based on the ideas of **segmentation**
 and exact positioning of data in memory. Rigorous experimentation has been
conducted to demonstrate the effectiveness and ease of use of the proposed
methodology vis-a-vis the traditional approaches of manipulating structured
data on secondary storage.
     The behaviour of high-level database algorithms in the proposed memory
mapped highly parallel environment, especially in systems, has been
investigated. A quantitative analytical model of computation in this
environment has been designed and validated through experiments conducted
on **several   database** join algorithms; parallel multi-disk versions of
the traditional join algorithms were developed for this purpose. An
analytical model of the system is extremely useful for data structure and
algorithm designers for predicting general performance behaviour without
having to construct and test specific algorithms. More importantly, a
quantitative model is an essential tool for database subsystems such as a
query   optimizer .

 28/5/20   (Item 13 from file: 35)

 **MULTIRELATIONS IN RELATIONAL DATABASES (DUPLICATES, ACYCLIC DATABASES,
FUNCTIONAL DEPENDENCIES, TABLEAUX)**

Many different **database** functions can be performed by chaining simple operations together. The processor can effectively replace the CPU bound portions of complex database operations with functions that run at the maximum memory access rate improving performance on complex queries.

Descriptors: Computers; Database management systems
Classification Codes and Description: 5.02 (Computer Systems General); 6.02
  (Bibliographic Search Services, Databases)
Main Heading: Information Processing and Control; Information Systems and
  Applications

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3001872
Continuously available database **server having** multiple **groups of nodes, each group maintaining a database copy with fragments stored on multiple nodes.**
Author(s): Hvasshovd, S -O
Patent Number(s): US 5423037
Publication Date: Jun 6, 1995
Language: English
Document Type: Patent
Record Type: Abstract
Journal Announcement: 3000

   A database server with a "shared nothing" system architecture has multiple nodes, each having its own central processing unit, primary and secondary memory for storing database tables and other data structures, and communication channels for communication with other ones of the nodes. The nodes are **divided** into first and second groups that share not resources. Each database table in the system is **divided** into fragments distributed for storage purposes over all the nodes in the system. To ensure continued data availability after a node failure, a "primary replica" and a "standby replica" of each fragment are each stored on nodes in different ones of the first and second groups. Database transactions are performed using the primary fragment replicas, and the standby replicas are updated using transaction log records. Every node of the system includes a data **dictionary** that stores information indicating where each primary and standby fragment replica is stored.

Descriptors: Client server systems; Computer architectures; Database
  management systems; Multiprocessing
Classification Codes and Description: 5.04 (Advanced Computing, Parallel
  Processing); 6.02 (Bibliographic Search Services, Databases)
Main Heading: Information Processing and Control; Information Systems and
  Applications

 28/5/23   (Item 3 from file: 202)
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2902233
Method and apparatus for compressing a dictionary **database by** partitioning **a master** dictionary database **into a** plurality **of functional parts and applying an optimum compression technique to each part.**
Author(s): Heising, M
Patent Number(s): US 5333313
Publication Date: Jul 26, 1994
Language: English
Document Type: Patent
Record Type: Abstract
Journal Announcement: 2900

A method and apparatus for compressing **dictionary** database information
is described. The method **divides** the database information into a number
of parts which are each conducive to a predetermined compression technique.
A first part database is formed consisting of all the entry points in the
dictionary wherein each entry point is associated with a unique word
number. A second part database is formed consisting of a multiplicity of
placeholders. A third part database is formed consisting of all the entry
points of the **dictionary** in the exact order in which they appear in the
dictionary . A fourth part database is formed consisting of the definitions
and usage notes without reference to their text. A fifth part database
allows retrieval of articles of interest without having to decompress the
entire **dictionary** . Compression techniques using multigrams and
minimum-redundancy codes are selectively applied to the different database
parts.

Descriptors: Data compression; Databases; **Dictionaries** ; Optimization
Classification Codes and Description: 4.08 (Coding, Compacting); 4.05
   (Translation and **Dictionaries**); 6.02 (Bibliographic Search Services,
   Databases
Main Heading: Information Recognition and Description; Information Systems
   and Applications

   28/5/24   (Item 4 from file: 202)
DIALOG(R)File 202:Info. Sci. & Tech. Abs.
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2801752
**Database sort and merge apparatus with multiple memory arrays having
alternating access.**
Author(s): Baum, R I; Brent, G.A.; Gibson, D.H.
Patent Number(s): US 5210870
Publication Date: May 11, 1993
Language: English
Document Type: Patent
Record Type: Abstract
Journal Announcement: 2800

   A processor functioning as a coprocessor attached to a central processing
complex provides efficient execution of the functions required for database
processing: sorting, merging, joining, searching and manipulating fields in
a host memory system. The specialized functional units: a memory interface
and field extractor/assembler, a Predicate Evaluator, a combined
sort/merge/join unit, a hasher, and a microcoded control processor, are all
centered around a **partitioned** Working Store. Each functional unit is
pipelined and optimized according to the function it performs, and executes
its portion of the **query efficiently** . All **functional** units execute
simultaneously under the control processor to achieve the desired results.
Many different **database** functions can be performed by chaining simple
operations together. The processor can effectively replace the CPU bound
portions of complex database operations with functions that run at the
maximum memory access rate improving performance on complex queries.

Descriptors: Access; Array processors; Databases; Host computers
Classification Codes and Description: 6.02 (Bibliographic Search Services,
   Databases); 5.00 (General Aspects)
Main Heading: Information Systems and Applications; Information Processing
   and Control

   28/5/25   (Item 5 from file: 202)
DIALOG(R)File 202:Info. Sci. & Tech. Abs.
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2502228
What are the possibilities for coordinating education information

databases?.
Book Title: Report No: ED 310 779
Author(s): Brandhorst, T
(44 pages)
Publication Date: Mar 29, 1989
Language: English
Document Type: Book Chapter
Record Type: Abstract
Journal Announcement: 2500

   This paper reviews the services provided by the ERIC system and suggests
ways to broaden its scope through coordination with other existing
education databases. The first of four major **sections** chronicles the
evolution of ERIC and explains why it has not been able to exercise true
bibliographic control over the literature of education. The second **section**
 identifies and discusses four stages at which efforts could be made to
coordinate the **various** education information **databases** : (1) coverage,
acquisition, and selection; (2) processing; (3) finding the right database
to search; and (4) retrieval. Examples of possible applications are
included. The third **section** introduces and discusses the concept of a
"federation" of education databases which would ensure that all domestic
educational resources would be available to users through clearly
delineated channels. It is suggested that ERIC could serve as a focus of
such an organization.

Descriptors: Databases; Education; Eric; Information systems
Classification Codes and Description: 6.02 (Bibliographic Search Services,
   Databases); 4.05 (Translation and **Dictionaries**)
Main Heading: Information Systems and Applications; Information Recognition
   and Description

   28/5/26   (Item 6 from file: 202)
DIALOG(R)File 202:Info. Sci. & Tech. Abs.
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1502711
Databases and clearinghouses: information resources for education.
Book Title: Information Series
Author(s): Feaster, Thelma J; et al.
(160 pages)
Publication Date: 1979
Publisher: National Center for Research in Vocational Education, OH State
   Univ.
Language: English
Document Type: Book Chapter
Record Type: Abstract
Journal Announcement: 1500

   Databases and clearinghouses useful in education are described in this
publication. **section** one, "databases," contains one-page summaries of 54
databases of interest to educators, covering a variety of subjects, such as
energy and environmental education, psychology, funding sources, language,
special education, art, child abuse and neglect, and research on early
childhood and adolescent development. **section** two, "clearinghouses,"
consists of one-page summaries of 30 clearinghouses as well as a list of
the 16 clearinghouses and network components of eric. subject areas covered
include consumer education, women's equity, adult education, test
collection, community education, drug abuse, and nutrition education. Each
database and clearinghouse summary includes such information as the
acronym; name of database; major subject area (s); date established;
publication/print journals; **thesaurus** /search aids; types of source
documents; forms of retrievable information; and information contact. A
sample computer search, using one of seven questions, is provided for **many**
 of the **databases**

Classification Codes and Description: 6.02 (Bibliographic Search Services,

Databases)
Main Heading: Information Systems and Applications

28/5/27   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC

7231122   INSPEC Abstract Number: C2002-05-6160-011
  Title: **The SH-tree: a super hybrid index structure for multidimensional data**
  Author(s): Tran Khanh Dang; Kung, J.; Wagner, R.
  Author Affiliation: Inst. for Appl. Knowledge Process., Linz Univ., Austria
  Conference Title: Database and Expert Systems Applications. 12th International Conference, DEXA 2001. Proceedings (Lecture Notes in Computer Science Vol.2113)   p.340-9
  Editor(s): Mayr, H.C.; Lazansky, J.; Quirchmayr, G.; Vogel, P.
  Publisher: Springer-Verlag, Berlin, Germany
  Publication Date: 2001   Country of Publication: Germany   xix+991 pp.
  ISBN: 3 540 42527 6   Material Identity Number: XX-2001-02494
  Conference Title: Database and Expert Systems Applications. 12th International Conference, DEXA 2001. Proceedings
  Conference Date: 3-5 Sept. 2001   Conference Location: Munich, Germany
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Practical (P)
  Abstract: Nowadays feature vector based similarity search is increasingly emerging in **database** systems. Consequently, **many** multidimensional data index techniques have been widely introduced to the database researcher community. These index techniques are categorized into two main classes: SP (space **partitioning**)/KD-tree-based and DP (data **partitioning**)/R-tree-based. Recently, a hybrid index structure has been proposed. It combines both SP/KD-tree-based and DP/R-tree-based techniques to form a new, more efficient index structure. However, weaknesses are still existing in techniques above. In this paper, we introduce a novel and flexible index structure for multidimensional data, the SH-tree (Super Hybrid tree). Theoretical analyses show that the SH-tree is a good combination of both techniques with respect to both presentation and search algorithms. It overcomes the shortcomings and makes use of their positive aspects to facilitate **efficient** similarity **searches** .   (36 Refs)
  Subfile: C
  Descriptors: database indexing; tree data structures; very large databases
  Identifiers: SH-tree; super hybrid index structure; multidimensional data ; feature vector based similarity search; index techniques; space **partitioning** ; flexible index structure; SP/KD-tree-based techniques; DP/R-tree-based techniques; bounding sphere; minimum bounding rectangle; multimedia databases; time-series databases; CAD/CAM systems; medical image databases; large databases; database systems; multidimensional data index techniques
  Class Codes: C6160 (Database management systems (DBMS)); C6120 (File organisation)
  Copyright 2002, IEE

28/5/28   (Item 2 from file: 2)
DIALOG(R)File   2:INSPEC

6596708   INSPEC Abstract Number: C2000-06-6160B-046
  Title: **On efficiently implementing SchemaSQL on a SQL database system**
  Author(s): Lakshmanan, L.V.S.; Sadri, F.; Subramanian, S.N.
  Author Affiliation: IIT, Bombay, India
  Conference Title: Very Large Data Bases. Proceedings of the Twenty-Fifth International Conference on Very Large Data Bases   p.471-82
  Editor(s): Atkinson, M.; Orlowska, M.E.; Valduriez, P.; Zdonik, S.; Brodie, M.

Publisher: Morgan Kaufmann Publishers, Orlando, FL, USA
Publication Date: 1999 Country of Publication: USA   xviii+761 pp.
Material Identity Number: XX-1999-02812
Conference Title: Proceedings of 25th International Conference on Very
Large Databases
Conference Sponsor: Oracle; Sun Microsys.; IBM; Microsoft SQLServer7.0;
Scottish Widows
Conference Date: 7-10 Sept. 1999   Conference Location: Edinburgh, UK
Language: English   Document Type: Conference Paper (PA)
Treatment: Practical (P); Theoretical (T); Experimental (X)

Abstract: SchemaSQL is a recently proposed extension to SQL for enabling
multi- **database** interoperability. **Several** recently identified
applications for SchemaSQL, however, mainly rely on its ability to treat
data and schema labels in a uniform manner, and call for an efficient
implementation of it on a single RDBMS. We first develop a logical algebra
for SchemaSQL by combining classical relational algebra with four
restructuring operators-unfold, fold, **split** , and unite-originally
introduced in the context of the tabular data model by Gyssens et al.,
(1996), and suitably adapted to fit the needs of SchemaSQL. We give an
algorithm for translating SchemaSQL queries/views involving restructuring,
into the logical algebra above. We also provide physical algebraic
operators which are useful for **query optimization** . Using the various
operators as a vehicle, we give several alternate implementation strategies
for SchemaSQL queries/views. All the proposed strategies can be
implementation non-intrusively on top of existing relational DBMS, in that
they do not require any additions to the existing set of plan operators. We
conducted a series of performance experiments based on TPC-D benchmark
data, using the IBM DB2 DBMS running on Windows NT. In addition to showing
the relative tradeoffs between various alternate strategies, our
experiments show the feasibility of implementing SchemaSQL on top of
traditional RDBMS in a non-intrusive manner. Furthermore, they also suggest
new plan operators which might profitably be added to the existing set
available to relational **query optimizers** , to further boost their
performance. (32 Refs)
  Subfile: C
  Descriptors: database theory; distributed databases; mathematical
operators; open systems; query formulation; query processing; relational
algebra; relational databases; software performance evaluation; SQL
  Identifiers: SchemaSQL; SQL; multi-database interoperability; RDBMS;
logical algebra; relational algebra; restructuring operators; unfold
operator; fold operator; **split** operator; unite operator; algebraic
operators; **query optimization** ; query strategies; relational DBMS;
performance experiments; TPC-D benchmark; IBM DB2 DBMS; Windows NT; plan
operators
  Class Codes: C6160B (Distributed databases); C6160D (Relational databases
); C4250 (Database theory); C7250R (Information retrieval techniques)
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 28/5/29   (Item 3 from file: 2)
DIALOG(R)File   2:INSPEC
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6546192   INSPEC Abstract Number: C2000-05-6160S-015
 Title: Indexing large metric spaces for similarity search queries
  Author(s): Bozkaya, T.; Ozsoyoglu, M.
  Author Affiliation: Oracle Corp., Redwood Shores, CA, USA
  Journal: ACM Transactions on Database Systems   vol.24, no.3   p.
361-404
  Publisher: ACM,
  Publication Date: Sept. 1999 Country of Publication: USA
  CODEN: ATDSD3 ISSN: 0362-5915
  SICI: 0362-5915(199909)24:3L.361:ILMS;1-F
  Material Identity Number: A316-2000-002
  U.S. Copyright Clearance Center Code: 0362-5915/99/0900-0361$5.00
  Language: English   Document Type: Journal Paper (JP)
  Treatment: Applications (A); Practical (P)

Abstract: One of the common queries in **many database** applications is finding approximate matches to a given query item from a collection of data items. For example, given an image database, one may want to retrieve all images that are similar to a given query image. Distance-based index structures are proposed for applications where the distance computations between objects of the data domain are expensive (such as high-dimensional data) and the distance function is metric. In this paper we consider using distance-based index structures for similarity queries on large metric spaces. We elaborate on the approach that uses reference points (vantage points) to **partition** the data space into spherical shell-like regions in a hierarchical manner. We introduce the multivantage point tree structure (mvp-tree) that uses more than one vantage point to **partition** the space into spherical cuts at each level. In answering similarity-based queries, the mvp-tree also utilizes the precomputed (at construction time) distances between the data points and the vantage points. We summarize the experiments comparing mvp-trees to vp-trees that have a similar **partitioning** strategy, but use only one vantage point, at each level and do not make use of the precomputed distances. Empirical studies show that the mvp-tree outperforms the vp-tree by 20% to 80% for varying query ranges and different distance distributions. Next, we generalize the idea of using multiple vantage points and discuss the results of experiments we have made to see how varying the number of vantage points in a node affects search performance and how much is gained in performance by making use of precomputed distances. The results show that, after all, it may be best to use a large number of vantage points in an internal node in order to end up with a single directory node and keep as many of the precomputed distances as possible to provide more **efficient** filtering during **search** operations. Finally, we provide some experimental results that compare mvp-trees with M-trees, which is a dynamic distance-based index structure for metric domains. (24 Refs)
   Subfile: C
   Descriptors: database indexing; tree data structures; visual databases
   Identifiers: large metric spaces indexing; similarity search queries; database; image database; high-dimensional dat; spherical shell-like regions; multivantage point tree structure; similarity-based queries; M-trees
   Class Codes: C6160S (Spatial and pictorial databases); C6120 (File organisation)

28/5/30   (Item 4 from file: 2)

5789549   INSPEC Abstract Number: C9802-6160B-008
   Title: **A hyperrelational approach to integration and manipulation of data in multidatabase systems**
   Author(s): Chiang Lee; Ming-Chuan Wu
   Author Affiliation: Inst. of Inf. Eng., Nat. Cheng Kung Univ., Tainan, Taiwan
   Abstract: The issue of interoperability among **multiple** autonomous **databases** has attracted a lot of attention from researchers. The past research on this issue can be roughly **divided** into two main categories: the tightly-integrated approach that integrates databases by building an integrated schema; and the loosely-integrated approach that achieves interoperability by using a multidatabase language. Past efforts focus on the issues in the first approach. The problem with the first approach is

that it lacks a convenient representation of the integrated schema at the system level and a sound mathematical basis for data manipulation in a multidatabase system. We propose to use hyperrelations as a powerful and succinct model for the global level representation of heterogeneous database schemas. A hyperrelation has the structure of a relation, but its contents are the schemas of the semantically equivalent local relations in the databases. With this representation, the metadata of the global database, local databases and the data of these databases are all representable by using the structure of a relation. The impact of such a representation is that all the elegant features of relational systems can be easily extended to multidatabase systems. A hyperrelational algebra is designed accordingly. This algebra is performed at the multidatabase systems (MDBS) level such that **query** transformation and **optimization** is supported on a sound mathematical basis. (52 Refs)

Subfile: C

Descriptors: data handling; database theory; distributed databases; open systems; query processing; relational algebra; relational databases

Identifiers: hyperrelational approach; data integration; data manipulation; multidatabase systems; interoperability; **multiple** autonomous **databases** ; tightly-integrated approach; loosely-integrated approach; multidatabase language; heterogeneous database; global database; local database; hyperrelational algebra; query transformation; **query optimization**

Class Codes: C6160B (Distributed databases); C4250 (Database theory); C6160D (Relational databases); C4210 (Formal logic)

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28/5/31   (Item 5 from file: 2)
DIALOG(R)File   2:INSPEC
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5750294   INSPEC Abstract Number: C9712-6160S-042
   Title: **Image decomposition and representation in large image database systems**
   Author(s): Guo, J.; Zhang, A.; Remias, E.; Sheikholeslami, G.

   Author Affiliation: Dept. of Comput. Sci., State Univ. of New York, Buffalo, NY, USA

   Abstract: To an increasing extent, applications demand the capability of retrieval based on image content. As a result, large image database systems need to be built to support effective and efficient accesses to image data on the basis of content. In this process, significant features must first be extracted from image data in their pixel format. These features must then be classified and indexed to assist efficient retrieval of image content. However, the issues central to automatic extraction and indexing of image content largely remain an open problem. Tools are not currently available with which to accurately specify image content for image database uses. In this paper, we investigate effective block-oriented image decomposition structures to be used as the representation of images in image database systems. Three types of block-oriented image decomposition structures, namely, quad-, quin- and nona-trees, are compared. In analyzing and comparing these structures, wavelet transforms are used to extract image content features. Our experimental analysis illustrates that nona-tree decomposition is the most effective of the three decomposition structures available to facilitate effective content-based image retrieval. Using the nona-tree structure to represent image content in an image **database** , **various** types of content-based **queries** and **efficient**

image retrieval can be supported through novel indexing and searching approaches. We demonstrate that the nona-tree structure provides a highly effective approach to supporting automatic organization of images in large image database systems. (28 Refs)
  Subfile: C
  Descriptors: feature extraction; image classification; image representation; image **segmentation** ; indexing; query processing; spatial data structures; tree data structures; very large databases; visual databases; wavelet transforms
  Identifiers: quad-trees; image representation; large image database systems; content-based queries; image data access; feature extraction; pixel format; feature classification; image feature indexing; block-oriented image decomposition structures; quin-trees; nona-trees; wavelet transforms; content-based image retrieval; searching; automatic image organization
  Class Codes: C6160S (Spatial and pictorial databases); C5260B (Computer vision and image processing techniques); C1130 (Integral transforms); C6120 (File organisation)
  Copyright 1997, IEE

  28/5/32   (Item 6 from file: 2)
DIALOG(R)File   2:INSPEC
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5430876   INSPEC Abstract Number: C9701-6160B-018
  Title: **Query processing in Distributed PIOS**
  Author(s): Rabitti, F.; Benedetti, L.; Demi, F.
  Author Affiliation: Istituto CNUCE, CNR, Pisa, Italy
  Conference Title: Proceedings. Seventh International Workshop on Database and Expert Systems Applications   p.470-5
  Editor(s): Wagner, R.R.; Thoma, H.
  Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
  Publication Date: 1996   Country of Publication: USA   xiii+521 pp.
  ISBN: 0 8186 7662 0   Material Identity Number: XX96-02444
  U.S. Copyright Clearance Center Code: 0 8186 7662 0/96/$05.00
  Conference Title: Proceedings of 7th International Conference and Workshop on Database and Expert Systems Applications: DEXA 96
  Conference Date: 9-10 Sept. 1996   Conference Location: Zurich, Switzerland
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Practical (P)
  Abstract: An approach to query processing in object oriented distributed database systems is proposed. Distributed PIOS is a server that supports an object-oriented data model, physical data independence (i.e. different strategies for storing class hierarchies, grouping, horizontal and vertical **partitioning** of objects), and fragmentation transparency (i.e. transactions are not aware of the distribution of **database** fragments on **several** nodes of a computer network). The problem of the **optimization** of distributed **queries** (i.e. determining which data must be accessed at which site and which data must be transmitted among sites) is the focus of the paper. (5 Refs)
  Subfile: C
  Descriptors: data structures; distributed databases; file servers; object-oriented databases; query processing
  Identifiers: query processing; object oriented distributed database systems; Distributed PIOS; server; object-oriented data model; physical data independence; fragmentation transparency; distributed **query optimization**
  Class Codes: C6160B (Distributed databases); C6160J (Object-oriented databases); C6120 (File organisation)
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  28/5/33   (Item 7 from file: 2)
DIALOG(R)File   2:INSPEC
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5050855   INSPEC Abstract Number: C9510-6160B-018
 Title: Load balancing in distributed query processing
 Author(s): Chengwen Liu; I-Ping Chu
 Author Affiliation: Comput. Sci., DePaul Univ., Chicago, IL, USA
 Conference   Title: Database Systems for Advanced Applications '95.
Proceedings of the Fourth International Conference on Database Systems for
Advanced Applications   p.256-63
 Editor(s): Ling, T.W.; Masunaga, Y.
 Publisher: World Scientific, Singapore
 Publication Date: 1995 Country of Publication: Singapore   xv+468 pp.
 ISBN: 981 02 2220 3
 Conference Title: Proceedings of 4th International Symposium on Database
Systems for Advanced Applications
 Conference Date: 10-13 April 1995   Conference Location: Singapore
 Language: English   Document Type: Conference Paper (PA)
 Treatment: Practical (P); Theoretical (T)

Abstract: Query processing is a very important issue in distributed
 databases   .   **Many** algorithms have been proposed to process distributed
 queries   **efficiently** . However, most of the algorithms use oversimplified
cost models and ignore the impact of work load generated by other
applications. As a result, load balancing is difficult to achieve in a real
environment.   We   provide   an adaptive scheme to do load balancing
effectively. The scheme takes into account an environment in which the load
at different sites varies. The **partition** and replicate strategy algorithm
is used to explain how to achieve load balancing in a multi-user
environment. The scheme also has learning capability such that the
parameters of cost estimation functions can be adaptively adjusted as the
environment changes.   (20 Refs)
 Subfile: C
 Descriptors: database theory; distributed databases; query processing;
resource allocation; software cost estimation
 Identifiers: load balancing; distributed query processing; distributed
databases; oversimplified cost models; work load; adaptive scheme;
 partition and replicate strategy algorithm; multi-user environment;
learning capability; cost estimation functions
 Class Codes: C6160B (Distributed databases); C4250 (Database theory);
C6150J (Operating systems)

 28/5/34   (Item 8 from file: 2)

4990096   INSPEC Abstract Number: C9508-7250-008
 Title: Efficient signature file methods for text retrieval
 Author(s): Dik Lun Lee; Young Man Kim; Gaurav Patel
 Author Affiliation: Dept. of Comput. & Inf. Sci., Ohio State Univ.,
Columbus, OH, USA
 Journal: IEEE Transactions on Knowledge and Data Engineering   vol.7,
no.3   p.423-35
 Publication Date: June 1995 Country of Publication: USA
 ISSN: 1041-4347
 U.S. Copyright Clearance Center Code: 1041-4347/95/$04.00
 Language: English   Document Type: Journal Paper (JP)
 Treatment: Practical (P)

Abstract: Signature files have been studied extensively, as an access
method for textual **databases** . **Many** approaches have been proposed for
 searching signatures files **efficiently** . However, different methods make
different assumptions and use different performance measures, making it
difficult to compare their performance. In this paper, we study three basic
methods proposed in the literature, namely, the indexed descriptor file,
the two-level superimposed coding scheme, and the **partitioned** signature
file approach. The contribution of this paper is two-fold. First, we
present a uniform analytical performance model so that the methods can be
compared fairly and consistently. The analysis shows that the two-level

superimposed coding scheme, if stored in a transposed file, has the best performance. Second, we extend the two-level superimposed coding method into a multilevel superimposed coding method, we obtain the optimal number of levels for the multilevel method and show that for databases with reasonable size the optimal value is much larger than 2, which is assumed in the two-level method. The accuracy of the analytical formula is demonstrated by simulation. (21 Refs)
    Subfile: C
    Descriptors: information retrieval
    Identifiers: signature file methods; text retrieval; access method; textual databases; performance measures; indexed descriptor file; two-level superimposed coding scheme; **partitioned** signature file approach; simulation
    Class Codes: C7250 (Information storage and retrieval)
    Copyright 1995, IEE

    Title: **Specifying rule-based** query optimizers **in a reflective framework**
    Author(s): Fegaras, L.; Maier, D.; Sheard, T.
    Author Affiliation: Dept. of Comput. Sci. & Eng., Oregon Graduate Center, Beaverton, OR, USA
    p.146-68
    Editor(s): Ceri, S.; Tanka, K.; Tsur, S.
    Publisher: Springer-Verlag, Berlin, Germany
    Publication Date: 1993 Country of Publication: West Germany   xl+488 pp.
    ISBN: 3 540 57530 8
    Conference Title: Third International Conference, DOOD '93. Deductive and Object-Oriented Databases
    Conference Date: 6-8 Dec. 1993   Conference Location: Phoenix, AZ, USA
    Language: English   Document Type: Conference Paper (PA)
    Treatment: Practical (P)

    Abstract: **Numerous** structures for **database query optimizers** have been proposed. Many of those proposals aimed at automating the construction of **query optimizers** from some kind of specification of optimizer behavior. These specification frameworks do a good job of **partitioning** and modularizing the kinds of information needed to generate a **query optimizer** . Most of them represent at least part of this information in a rule-like form. Nevertheless, large portions of these specifications still take a procedural form. The contributions of this work are threefold. We present a language for specifying optimizers that captures a larger portion of the necessary information in a declarative manner. This language is in turn based on a model of query rewriting where query expressions carry annotations that are propagated during query transformation and planning. This framework is reminiscent of inherited and synthesized attributes for attribute grammars, and we believe it is expressive of a wide range of information: logical and physical properties, both desired and delivered, cost estimates, optimization contexts, and control strategies. Finally, we present a mechanism for processing optimizer specifications that is based on compile-time reflection. This mechanism proves to be succinct and flexible, allowing modifications of the specification syntax, incorporation of new capabilities into generated optimizers, and retargeting the translation to a variety of optimization frameworks. We report on an implementation of our ideas using the CRML reflective functional language and on optimizer specifications we have written for several query algebras. (13 Refs)
    Subfile: C
    Descriptors: attribute grammars; deductive databases; formal specification; query languages; query processing; rewriting systems
    Identifiers: rule-based **query optimizer** specification; reflective framework; database **query optimizers** ; modularisation; **partitioning** ;

rule-like form; procedural form; language; query rewriting; query
expressions; query transformation; query planning; synthesized attributes;
inherited attributes; attribute grammars; logical properties; physical
properties; cost estimates; optimization contexts; control strategies;
compile-time reflection; specification syntax
  Class Codes: C6160K (Deductive databases); C6110F (Formal methods);
C6140D (High level languages); C4210L (Formal languages and computational
linguistics); C4250 (Database theory)

28/5/39   (Item 13 from file: 2)

02619972   INSPEC Abstract Number: C86019885
  Title: **Presearch user adaptation to lexical environment of a dialog
automated information system**
  Author(s): Pavlov, A.N.; Popov, I.I.
  Journal: Nauchno-Tekhnicheskaya Informatsiya, Seriya 2   vol.18, no.5
p.8-14
  Publication Date: 1984 Country of Publication: USSR
  CODEN: NIPSBP ISSN: 0548-0027
  Translated in: Automatic Documentation and Mathematical Linguistics
vol.18, no.9   p.12-23
  Publication Date: 1984   Country of Publication: USA
  CODEN: ADMLAE   ISSN: 0005-1055
  U.S. Copyright Clearance Center Code: 0005-1055/85/$20.00
  Language: English   Document Type: Journal Paper (JP)
  Treatment: Practical (P)
  Abstract: Dialog automated information systems with access to both local
data bases and remote access to information resources of integrated centers
are an efficient form of information service. Despite the broad
capabilities in accumulating and processing information files and **data
bases** of **various** structures, dialog systems have run into conflicts and
problems, especially the contradiction between search in the dialog mode
and manual indexing of requests in thesauri and rubricators; the
full-fledged syntactic tools in dialog information languages and the
absence of semantic procedures to reveal the relationships between the
search terms; and the broad capabilities of dialog information systems in
organizing retrieval files by selecting natural language **segments** from
the documents, on the one hand, and the absence of any practical strategies
for search in such files, on the other. The authors describe an
experimental system of user adjustment to the **vocabulary** environment of a
dialog information system, with preliminary semantic and statistical
searches. A detailed study of the interaction between the user and the
thesaurus -free **vocabulary** of the data base is based on a probabilistic
model of statistical search. (14 Refs)
  Subfile: C
  Descriptors: database management systems; information retrieval systems;
interactive systems
  Identifiers: presearch user adaptation; lexical environment; dialog
automated information system; local data bases; remote access; information
resources; integrated centers; information files; dialog systems; indexing;
thesauri; information languages; natural language **segments** ; **vocabulary**
environment; probabilistic model; statistical search
  Class Codes: C6160 (Database management systems (DBMS)); C7250 (
Information storage and retrieval)

28/5/41   (Item 1 from file: 94)

00393943   JICST ACCESSION NUMBER: 87A0167558   FILE SEGMENT: JICST-E
**AVQ-based preprocessor using spectral dynamic features for large
    vocabulary word recognition.**

FURUI SADAOKI (1)
(1) NTT Dentsuken
ABSTRACT: This paper proposes a new method of a VQ(Vector
    Quantization)-based preprocessor for reducing the amount of computation
    in large **vocabulary** isolated word recognition. A speech wave is
    analyzed by time functions of both cepstrum coefficients and their
    short-time regression coefficients, and a universal VQ codebook for
    these time functions is constructed based on a multiple speaker-
    multiple word **database** . Next, a separate codebook is designed as a
    subset of the universal codebook for each word in the **vocabulary** .
    These word-based codebooks are used as a front-end preprocessor to
    eliminate word candidates whose distance scores are large. A dynamic
    time-warping processor based on a word- **dictionary** in which each word
    is represented as a time-sequence of the universal codebook elements (
    SPLIT method) then resolves the choice among the remaining word·
    candidates. Effectiveness of this method has been ascertained by
    recognition experiments using a database consisting of words from a
    vocabulary of 100 Japanese city names uttered by 20 male
    speakers.(author abst.)
DESCRIPTORS: speech recognition; speaker recognition; word;
    operation(mathematics); vector quantization; feature selection;
    pretreatment; speech analysis; cepstrum; time series; clustering;
    experiment
BROADER DESCRIPTORS: pattern recognition; recognition; **vocabulary** ; signal
    quantization; signal processing; treatment; quantization; modification;
    selection; sound analysis; analysis(separation); analysis; speech
    processing; information processing
CLASSIFICATION CODE(S): JE07000S

· 18/5,K/1   (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784139
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A SELF-DESCRIBING STREAM IN A COMMUNICATION SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE DE FABRICATION DESTINES A UN FLUX D'AUTODESCRIPTEURS DANS UN ENVIRONNEMENT DE MODELES DE SERVICES DE COMMUNICATION

Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor.(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 1400 Page Mill
    Road, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116734 A2-A3 20010308 (WO 0116734)
  Application: WO 2000US23999 20000831 (PCT/WO US0023999)
  Priority Application: US 99387070 19990831
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
  LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
  SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: G06F-009/46
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 150517

English Abstract
  A system, method, and article of manufacture are described for providing
  a self-describing stream-based communication system. Messages are sent
  which include data between a sending system and a receiving system.
  Meta-data is attached to the messages being sent between the sending
  system and the receiving system. The data of the messages sent from the
  sending system to the receiving system is translated based on the
  meta-data. The meta-data includes first and second sections. The first
  section identifies a type of object associated with the data and a number
  of attribute descriptors in the data. The second section includes a
  series of the attribute descriptors defining elements of the data.

French Abstract
  L'invention concerne un systeme, un procede et un article de fabrication
  destines a constituer.un systeme de communication a base d'un flux
  d'autodescripteurs. Des messages comprenant des donnees sont envoyes,
  entre un systeme expediteur et un systeme recepteur. Des metadonnees sont
  attachees aux messages en cours d'envoi entre le systeme expediteur et le
  systeme recepteur. Les donnees des messages envoyes du systeme expediteur
  au systeme recepteur sont traduites d'apres les metadonnees, lesquelles
  comprennent des premiere et seconde sections. La premiere section
  identifie un type d'objet associe aux donnees et un nombre de
  descripteurs d'attributs presents dans celles-ci. La seconde section
  comprend une serie de descripteurs d'attributs definissant des elements
  des donnees.

Legal Status (Type, Date, Text)
Publication 20010308 A2 Without international search report and to be

Fulltext Availability:
  Detailed Description

Detailed Description
... of these components will require special attention
  because of the functional demands of the building?"
  Oxford English **Dictionary** Definition.

  The conceptual structure and overall logical organization of a computer
  or computer-based systeinfrom the point...Transaction Management Services
  coordinate transactions across one or more resource managers either on a
  single machine or **multiple** machines within the network. Transaction
  Management Services ensure that all resources for a transaction are
  updated, or...

...of an update failure on any one resource, all updates are rolled back.

  This services that allow **multiple** applications to share data with
  integrity. The transaction management services help implement the notion
  of a transaction...a printer name is passed. For status update, the new
  status code is passed.

  Request Report. The **Request** Report **function** is responsible for
  processing report request messages written to the report process queue.
  It creates a new...single report to single or multiple destinations.

  16. Destination Rationalization: For some systems, it is possible that
  multiple copies of a report will be sent to the same site -- to **several**
   different users, for example. In these cases, it is highly desirable to
  have the report architecture recognize...system); and (2) Message-based
  architecture (relying on specific mail systems for much of the
  functionality) versus **Database** -based.

  What is the nature of the workflow?
  246
  How an organization approaches the management of its...of Capability
  Release Design and into Capability Release Build and Test 3610, Business
  Components are transformed into **Partitioned** Business Components based
  on the realities of the technical environment. These constraints include
  distribution requirements, legacy integration integrity of the Business
  Component model, a given **Partitioned** Business Component should descend
  from one and only one Business Component.

  In other words, it should never...

...the Business Component level. Also at this time, the project team
  designs the internal workings of each **Partitioned** Business Component.
  This could mean the Engineering Components that make up the **Partitioned**
  Business Component, the "wrapper" for a legacy or packaged system, and
  other code.

  In Capability Release Build and Test, **Partitioned** Business Components
  are built and tested. The build process varies depending upon the
  technology chosen to build the internal workings of each **Partitioned**
  Business Component. Among the many tests that are perfortned during this
  262
  stage, the component, assembly, and performance tests are impacted the
  most by this style of development. A component test addresses a
  Partitioned Business Component as a single unit by testing its
  interfaces and its internal workings, while an assembly test addresses
  the interactions between **Partitioned** Business Components by testing

᷎ broader scenarios. The performance test is impacted primarily by the techniques one would...

...to resolve the various performance issues.

For example, it's common to run multiple copies of a **Partitioned** Business Component across multiple servers to handle a greater transaction volume.

In Deployment 3612, the **Partitioned** Business Components are packaged and deployed as part of the application into the production environment. The application parameters and the manner in which the **Partitioned** Business Components are distributed are tweaked based on how well the application performs.

Well designed Business Components...would be logical to conclude that the two types of Business Components translate to two types of **Partitioned** Business Components, but a small adjustment is required. Entity-centric Business Components translate directly to Business Entity...

...Component.

Figure 38 illustrates the relationship between the spectrum of Business Components 3800 and the types of **Partitioned** Business Components 3802. Business Entity Components 3804 and Business Process Components 3806 are straightforward. The former is...

...Figure 40 is a diagram of the Eagle Application Model which illustrates how the different types of **Partitioned** Business Components might interact with each other. Business Entity Components 4002 and Business Process Components 4004 typically...

...while User Interface Components 4006 typically reside on a client.

Figure 41 illustrates what makes up a **Partitioned** Business Component 4100.' As long as a component does what it's suppose to do, it doesn...

...benefit of encapsulation. Classifying this code is a different matter. Some code 4102 is specific to the **Partitioned** Business Component. Other code is more widely reusable, both ftinctionally and technically; this is where one finds...

...for designing and building this code.

Engineering Components are physical building blocks used in the assembly of **Partitioned** Business Components. They are independent pieces of software that provide ftinctionality that is generally useful across a... increasing speed to market and the ability to cope with change (0.7 probability)."
Business Components and **Partitioned** Business Components represent a major improvement in design capability-some might argue the first major change in...

...for this breakthrough.

Business Components model entities and processes at the enterprise level, and they evolve into **Partitioned** Business Components that are integrated into applications that operate over a network. Consequently, they serve as an...

...to the application's overall maintainability..

To manage the complexity of a large problem, it must be **divided** into smaller, coherent parts.

Partitioned Business Components provide an excellent way to **divide** and conquer in a way that ties the application to the business domain.

• They provide the ability...

...reusable in multiple contexts. On the other end of the spectrum, objects are too small to effectively **divide** and conquer; there are simply too many of them.

Partitioned Business Components provide a greater emphasis on application layering-a well known, but oftemneglected concept in application development.

Partitioned Business Components are application building blocks. As an application modeling.

tool, they depict how various elements of...focus appropriately on the high-level reuse enabled by processes, patterns, and frameworks.

Although Business Components and **Partitioned** Business Components represent a significant breakthrough in design capability, the architectural frameworks to support this breakthrough are...

...Business Components are the same as applications, but in fact, applications are assembled from Business Components (or **Partitioned** Business Components to be more accurate). A typical application might have ten to twenty Business Components. On...5 and other requirements. Look for behaviors that will be supported by the application. In other This **section** addresses several frequently asked questions that more broadly apply to the physical implementation of component- and object...

18/5,K/2   (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00459165   **Image available**
UNIVERSAL EPISTEMOLOGICAL MACHINE (A.K.A. ANDROID)
MACHINE EPISTEMOLOGIQUE UNIVERSELLE (ANDROIDE A.K.A.)
Patent Applicant/Assignee:
  DATIG William E,
Inventor(s):
  DATIG William E,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9849629 A1 19981105
  Application: WO 98US8527 19980427 (PCT/WO US9808527)
  Priority Application: US 97847230 19970501; US 97876378 19970616; US
    9833676 19980303
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
  FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
  MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US
  UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE
  CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN
  ML MR NE SN TD TG
Main International Patent Class: G06F-015/18
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 265553

English Abstract
  A universal epistemological machine (U.M.) enables arbitrary synthetic forms of existence (that is, thinking machines) known as androids, which know and perceive the world as do human beings. The U.M. embodies transformations of an extended existential universe of human being, and comprises means for transforming, representing, embodying, translating and realizing a plurality of universal forms. These universal forms comprise universal objects in the form of physical embodiments of universal knowledge structures. The U.M. comprises a plurality of

- epistemic instances comprising the universal objects and universal transformations of those universal objects, expressed in a universal grammar, which allows all human knowledge to be enabling media for the U.M.

French Abstract

   Une machine epistemologique universelle (M.U.) permet de creer des formes de vie synthetiques arbitraires (c'est-a-dire des machines pensantes) connues sous le nom d'androides qui connaissent et percoivent le monde comme le font les etre humains. La M.U. integre des transformations d'un univers existentiel etendu d'etres humains et comprend des moyens permettant de transformer, representer, integrer, traduire et realiser une pluralite de formes universelles. Ces formes universelles comprennent des objets universels se presentant sous forme de representations physiques de structures de connaissances universelles. La M.U. comprend une pluralite d'instances epistemiques comprenant ces objets universels et les transformation universelles de ces objets universels, exprimees dans une grammaire universelle qui permet a toute la connaissance humaine d'etre un support d'integration pour la M.U.

Fulltext Availability:
  Claims

Claim
  ... sentence. Since our thoughts transform in accordance with epistemic instance, we construct sentences episternically, not in subject-**predicate** structure. In order to construct an English sentence naturally, one must ignore the grammar of English-the...

DIALOG(R)File 347:JAPIO

02233563   **Image available**
SENTENCE ERROR DETECTION SYSTEM

PUB. NO.:   62-150463. [JP 62150463 A]
PUBLISHED: July 04, 1987 (19870704)
INVENTOR(s):   FUKUSHIMA SHUNICHI
APPLICANT(s):   NEC CORP [000423] (A Japanese Company or Corporation), JP
                (Japan)
APPL. NO.:   60-291525 [JP 85291525]
FILED: December 24, 1985 (19851224)
INTL CLASS: [4] G06F-015/20
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JAPIO KEYWORD: R106 (INFORMATION PROCESSING -- Kanji Information Processing)
                ; R139 (INFORMATION PROCESSING -- Word Processors)
JOURNAL: Section: P, Section No. 646, Vol. 11, No. 383, Pg. 131,
                December 15, 1987 (19871215)

ABSTRACT
PURPOSE: To contrive efficient proofreading by using a concordant adverb
dictionary storing sets of adverbs calling for the concordance with the
expression of the **predicate** and the classification of **significance** of
the expression of the **predicate** requested by the adverb so as to check
the usage of the word in concordance with each other.

CONSTITUTION: A concordant adverb stored in a concordant adverb dictionary
2 is retrieve from a sentence in a sentence storage means 1 by a concordant
adverb retrieval means 3, the result is outputted to a **predicate**
retrieval means 5, the classification of **significance** of the expression
of the **predicate** called for by the adverb is extracted from the
dictionary 2 and given to a **significance** comparison means 7. The means 5
retrieves the **predicate** in concordance with the adverb from the sentence
in the storage means 1, outputs the expression of the detected predicate to
a predicate expression deciding means 6 and outputs the location of the
adverb and predicate to an error suggestion means 8. The means 6 references
the **predicate** expression **dictionary** 4 as to the expression of the sent
predicate to decide the classification of **significance** and outputs the
result to the means 7. The means 7 compares the inputted two
classifications of meaning, and when they are dissident, the means 8
suggests the adverb and predicate as an error.

DIALOG(R)File 350:Derwent WPIX

014891914   **Image available**
WPI Acc No: 2002-712620/200277
XRPX Acc No: N02-562149
  Multiagent type integrated database system for query processing, refers
  information about predicates for converting query which is thrown into
  integrated database **system, into** several **query sets**
Patent Assignee: HITACHI LTD (HITA); NISHIZAWA I (NISH-I); SHINTANI T
  (SHIN-I); USHIJIMA K (USHI-I)
Inventor: NISHIZAWA I; SHINTANI T; USHIJIMA K
Number of Countries: 002 Number of Patents: 002
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
US 20020120618 A1   20020829 US 2001932114   A   20010820 200277 B
JP 2002259425 A   20020913 JP 200153474   A   20010228 200277

Priority Applications (No Type Date): JP 200153474 A 20010228
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes

US 20020120618 A1   20 G06F-007/00
JP 2002259425 A   13 G06F-017/30

Abstract (Basic): US 20020120618 A1
        NOVELTY - An expansion unit (9) refers to information about
predicates used in query processing and the degree of the connections
of the predicates that are stored in a **predicate dictionary** (4) for
converting a query which is input into the integrated database system
(1), into several query sets.
        DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for
recorded medium storing query processing program.
        USE - For query processing e.g. for DNA sequence analysis
application.
        ADVANTAGE - By referring to the information about the predicates
for converting the query input into the **database** system into **several**
 query sets, the cost of the query processing is minimized and accurate
query results are obtained.
        DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of
the integrated database system.
        Integrated database system (1)
        Predicate dictionary (4)
        Expansion unit (9)
        pp; 20 DwgNo 1/11
Title Terms: TYPE; INTEGRATE; DATABASE; SYSTEM; QUERY; PROCESS; REFER;
  INFORMATION; CONVERT; QUERY; THROW; INTEGRATE; DATABASE; SYSTEM; QUERY;
  SET
Derwent Class: T01
International Patent Class (Main): G06F-007/00; G06F-017/30
File Segment: EPI

   18/5/3   (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014168810   **Image available**
WPI Acc No: 2001-653038/200175
Related WPI Acc No: 1999-381180
XRPX Acc No: N01-488481
   **Search system used in Internet applications, extracts search objective
   database based on stored search log indicating search condition of**
   various   databases
Patent Assignee: NEC CORP (NIDE)
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2001273297	A	20011005	JP 97315099	A	19971117	200175	B
			JP 200152728	A	19971117		
JP 3248530	B2	20020121	JP 97315099	A	19971117	200207	
			JP 200152728	A	19971117		

Priority Applications (No Type Date): JP 97315099 A 19971117; JP 200152728
  A 19971117
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2001273297	A		20	G06F-017/30	Div ex application JP 97315099
JP 3248530	B2		19	G06F-017/30	Div ex application JP 97315099
					Previous Publ. patent JP 2001273297

Abstract (Basic): JP 2001273297 A
        NOVELTY - An operation log acquisition **section** (110) stores
search log indicating search condition of **various databases** . A
preference database extraction **section** (130) extracts search
objective database, and a search device (300) displays the search
objective database sequentially, based on the search conditions.
        DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
recording medium.
        USE - For searching database in Internet applications.

ADVANTAGE - **Searches** suitable database **efficiently** within a short time.
DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the search system. (Drawing includes non-English language text).
Operation log acquisition **section** (110)
Preference database extraction ·**section** · (130)
Search device (300)
pp; 20 DwgNo 1/21
Title Terms: SEARCH; SYSTEM; APPLY; EXTRACT; SEARCH; OBJECTIVE; DATABASE; BASED; STORAGE; SEARCH; LOG; INDICATE; SEARCH; CONDITION; VARIOUS
Derwent Class: T01
International Patent Class (Main): G06F-017/30
File Segment: EPI

18/5/4 **(Item 3 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
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012597956 **Image available**
WPI Acc No: 1999-404062/199934
XRPX Acc No: N99-301100
Concurrent control method for multi server database system, B-trees
Patent Assignee: RISHE N (RISH-I)
Inventor: RISHE N D; SHAPOSHNIKOV A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5920857	A	19990706	US 97905679	A	19970804	199934	B

Priority Applications (No Type Date): US 97905679 A 19970804
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5920857	A		8	G06F-017/30	

Abstract (Basic): US 5920857 A
NOVELTY - Transactions (T) are **split** into sub-transactions (Tn) at transaction originator server and are executed using a two phase commit protocol. Logs of committed sub-transactions (CL) and sub-transactions (WL) ready to commit are maintained and verified at each server for each incoming transaction (Tn).
DETAILED DESCRIPTION - During transaction execution at the server, a logical time is incremented at each server machine. A transaction T(L,D,V) is accumulated at client in three sets with an insert set (I), delete set (D) and a verify set (V) comprising set of data items to be inserted, deleted and set of descriptions (P) which·contains information that identifies data retrieval operations performed by the client with respect to server, the particular server subjected to the client data retrieval operations and a logical time stamp at the particular server. A transaction (T) is delivered from a client to the selected server which is being designated as the transaction originator server. An INDEPENDENT CLAIM is also included for **query optimization** method.
USE - For multi server **database** system comprising **multiple** client and multiple server and for B-tree.
ADVANTAGE - The computational load to the server is reduced and a fine granularity is implemented which improves the overall server performance. The use of synchronized physical clocks is eliminated by using logical clocks.
DESCRIPTION OF DRAWING(S) - The figure shows the work of an optimistic concurrency control algorithm with logical time stamps.
pp; 8 DwgNo 2/2
Title Terms: CONCURRENT; CONTROL; METHOD; MULTI; SERVE; DATABASE; SYSTEM; TREE
Derwent Class: T01
International Patent Class (Main): G06F-017/30 ·
File Segment: EPI

18/5/5   (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012408291   **Image available**
WPI Acc No: 1999-214399/199918
XRPX Acc No: N99-157802
  SQL queries optimization **method in relation database management
  system**
Patent Assignee: NCR CORP (NATC)
Inventor: KRAUS T B; RAMESH B; WALTER T A
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
US 5884299   A   19990316 US 97795114   A   19970206 199918 B

Priority Applications (No Type Date): US 97795114 A 19970206
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
US 5884299   A   11 G06F-017/30

Abstract (Basic): US 5884299 A
     NOVELTY - The query is examined to determine if it includes one or
  more aggregation operating on rows of a table in relational **database** .
   Several local aggregate result rows are created by aggregating rows
  of table by aggregation operation. The aggregation result rows are
  redistributed to several global aggregation operations to create
  several global aggregate result rows.
     DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
  query optimizing apparatus.
     USE - For **optimizing** SQL **queries** in relation database
  management system using aggregate or grouping function. In MPP computer
  system.
     ADVANTAGE - The queries are **splitted** into sub-queries by a single
  processor in order to minimize the overhead associated with the
  processing of the entire query. The sub-queries are performed
  simultaneously on a single processor using a multitasking operating
  environment.
     DESCRIPTION OF DRAWING(S) - The figure represents flow chart for
  the execution of the global aggregation in SQL **queries   optimization**
  method.
     pp; 11 DwgNo 5/5
Title Terms: SQL; QUERY; METHOD; RELATED; DATABASE; MANAGEMENT; SYSTEM
Derwent Class: T01
International Patent Class (Main): G06F-017/30
File Segment: EPI

18/5/6   (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011025802   **Image available**
WPI Acc No: 1997-003726/199701
XRPX Acc No: N97-003306
  **Database search system e.g. for patent official report, scientific paper,
  newspaper report - has index search part and whole sentence search part
  with which database is searched according to input search type**
Patent Assignee: NIPPON STEEL CORP (YAWA)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 8272806   A   19961018 JP 9577839   A   19950403 199701 B

Priority Applications (No Type Date): JP 9577839 A 19950403

Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 8272806   A   8 G06F-017/30

Abstract (Basic): JP 8272806 A
        The system has a database storing part (11) in which the database
    is searched. A search type is given as the input to an input part (15).
    A division part (21) **divides** the search type to a single term type.
    Two search parts, an index search part (13) and a whole sentence search
    part (14) are also provided.
        An assignment part (32) assigns the single term type to both the
    search parts respectively. An arithmetic part (33) carries out logical
    operation of the results obtained from the index search and the whole
    sentence search parts, based on the search type and gives an output to
    a display part (16).
        ADVANTAGE - **Searches database efficiently**, using **multiple
    search** techniques.
        Dwg.1/4
Title Terms: DATABASE; SEARCH; SYSTEM; PATENT; OFFICE; REPORT; SCIENCE;
    PAPER; NEWSPAPER; REPORT; INDEX; SEARCH; PART; WHOLE; SENTENCE; SEARCH;
    PART; DATABASE; SEARCH; ACCORD; INPUT; SEARCH; TYPE
Derwent Class: T01
International Patent Class (Main): G06F-017/30
File Segment: EPI

  18/5/7   (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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010790425   **Image available**
WPI Acc No: 1996-287378/199629
XRPX Acc No: N96-241183
  **Providing extensible query architecture for information retrieval system
  - includes search application that has variety of code module classes,
  each implementing specific type of query model on data types in database**
Patent Assignee: ARCHITEXT SOFTWARE INC (ARCH-N); EXCITE INC (EXCI-N)
Inventor: SPENCER G
Number of Countries: 068 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9618159	A2	19960613	WO 95US16496	A	19951207	199629	B
AU 9646413	A	19960626	AU 9646413	A	19951207	199641	
WO 9618159	A3	19960906	WO 95US16496	A	19951207	199645	
US 5577241	A	19961119	US 94350967	A	19941207	199701	
EP 796470	A1	19970924	EP 95944342	A	19951207	199743	
			WO 95US16496	A	19951207		
EP 796470	B1	19990414	EP 95944342	A	19951207	199919	
			WO 95US16496	A	19951207		
DE 69509118	E	19990520	DE 609118	A	19951207	199926	
			EP 95944342	A	19951207		
			WO 95US16496	A	19951207		
ES 2132769	T3	19990816	EP 95944342	A	19951207	199939	

Priority Applications (No Type Date): US 94350967 A 19941207
Cited Patents: Jnl.Ref; No-SR.Pub
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
WO 9618159   A2 E 26 G06F-017/30
    Designated States (National): AL AM AT AU BB BG BR BY CA CH CN CZ DE DK
    EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MK MN MW MX
    NO NZ PL PT RO RU SD SE SG SI SK TJ TM TT UA UG UZ VN
    Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT KE LS LU
    MC MW NL OA PT SD SE SZ UG
AU 9646413   A   G06F-017/30   Based on patent WO 9618159
US 5577241   A   14 G06F-017/30
EP 796470   A1 E   G06F-017/30   Based on patent WO 9618159

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

EP	796470	B1 E	G06F-017/30	Based on patent WO 9618159

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DE	69509118	E	G06F-017/30	Based on patent EP 796470
				Based on patent WO 9618159
ES	2132769	T3	G06F-017/30	Based on patent EP 796470
WO	9618159	A3	G06F-017/30	

Abstract (Basic): WO 9618159 A
     The system has an extensible query architecture which allows an applications programmer to integrate new query models into the system as desired. The architecture is based on an abstract base class of query nodes, or code objects that retrieve records from the database. Specific sub-classes are derived from the base class. Each query node class includes a **search function** that iteratively **searches** the database for matching records. Query node objects are instantiated by associated node creator class objects.
     A parser is used to **parse** a search query into its components, including nested search queries used to combine various query models. The parser determines the particular search operator keywords and the node creator object. The node creator objects return pointers to the created query nodes.
     ADVANTAGE - Allows parser to assemble complex hierarchical query nodes that combine multiple query models.
     Dwg.1/6

Title Terms: EXTEND; QUERY; ARCHITECTURE; INFORMATION; RETRIEVAL; SYSTEM; SEARCH; APPLY; VARIETY; CODE; MODULE; CLASS; IMPLEMENT; SPECIFIC; TYPE; QUERY; MODEL; DATA; TYPE; DATABASE
Derwent Class: T01
International Patent Class (Main): G06F-017/30
File Segment: EPI

11/5/1
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00120085   DOCUMENT TYPE: Review

PRODUCT NAMES: EDA/SQL   (602612); DataDirect   (531961); Cyberprise Portal
(778052); uniVerse DB   (269484); Java   (573744)

TITLE: Unlocking Buried Treasure
AUTHOR: Babcock, Charles
SOURCE: Interactive Week,   v6 n30 p44(2) Jul 26, 1999
ISSN: 1078-7259
HOMEPAGE: http://www.interactive-week.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Information Builders' EDA/SQL, Merant's DataDirect, Wall Data's Cyberprise
Portal, Informix Software's uniVerse DB, and Sun Microsystems' Java are
middleware products that take disparate approaches to giving Web developers
easier data access. EDA is a seasoned product suite that can gain access to
88 **separate** data sources, **optimize** the **query** against the source, and
manage data from multiple sources into one report and back to the
requester . DataDirect links to seven **databases** , connects Java server
applications to data sources through Java **Database** Connectivity (JDBC)
drivers, and communicates with Microsoft-based sources, including Lotus
Notes. Cyberprise Portal, a Windows NT-based portal-building framework,
includes complete host and **database** access to **many** **database** products.
uniVerseDB is a developers' **database** , with an interface for access to
RDBMSes and other **databases** . **Many** older data stores were constructed
before the need to support mobile users was considered, so new types of
data access are required to link such remote users to their home offices.
For instance, ThinWeb's Java-enabled product bases data access on Java's
cross-platform portability and an automated structure for supplying access
in Web applications. Vendors competing in the market include Attachmate,
IBI, Merant, PLATINUM technology (now Computer Associates), Sybase, Cross
Access, OpenLink Software, and thinWeb.com.

COMPANY NAME: Information Builders Inc   (032174); DataDirect Technologies
     (716316); NetManage·Inc   (525375); Informix ·Software Inc   (110451); Sun
     Microsystems Inc   (385557)
SPECIAL FEATURE: Charts
DESCRIPTORS: **Database** Management; IBM PC & Compatibles; Integration
     Software; Java; Middleware; Portals; Program Development; Windows
     NT/2000
REVISION DATE: 20020228

11/5/2
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00082373   DOCUMENT TYPE: Review

PRODUCT NAMES: CD-ROMs   (830050)

TITLE: CDROM: hypes and hopes for the rest of the century
AUTHOR: Jacso, Peter
SOURCE: Electronic Library,   v13 n4 p347(5) Aug 1995
ISSN: 0264-0473   ·   · ··   ·   ·
HOMEPAGE: http://www.learned.co.uk

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Confusing claims for the advantages of online CD-ROM **database search**ing versus **separately** purchased CD-ROM **databases** (which are sometimes available in lower-cost paper versions) do nothing to guide users in choosing a product. Users must assess ease of use; power; storage and delivery; quality; functionality; speed; appeal; and total cost of using the media. In selecting CD-ROM **databases** , users have **many** choices for some **databases** (for example, cinema directories), and none for others; subsets of large **databases** are also available. New CD-ROM **databases** likely to hit the market include popular magazines, new magazines, niche offerings, and reference books. Many products will offer full- **search functions** and images, and many will be cross-licensed (available from more than one vendor). Although only KnowledgFinder software provides real natural language functions, this valuable technology may be more widely implemented.

COMPANY NAME: Vendor Independent   (999999)
SPECIAL FEATURE: Charts
DESCRIPTORS: CD-ROMs; Content Providers; Information Retrieval; Libraries
REVISION DATE: 20000830

11/5/3
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00071410   DOCUMENT TYPE: Review

PRODUCT NAMES: Parallel Processing (830260); Database **Management** (830025

TITLE: Breaking Up is Hard to Do
AUTHOR: Ferguson, Mike
SOURCE: Database Programming & Design,   v7 n11 p33(7) Nov 1994
ISSN: 0895-4518
HOMEPAGE: http://www.dbpd.com

RECORD TYPE: Review
REVIEW TYPE: Product Analysis
GRADE: Product Analysis, No Rating

Some vendors are beginning to experiment with combining parallel **query** across instances, with parallel **query** within instances, in a shared-nothing architecture. Each node in this architecture would be a multiprocessor node, and **queries** would be broken into parts. Each part of a parallelized **query** is passed to a DBMS instance, where it is parallelized again to make the best use of each node's hardware. This concept of two-level parallelism is appearing in **many** second-generation **database** middleware products. The basis for parallel **query optimization** is breaking SQL statements into multiple steps. This depends on how well the data is **partitioned** across multiple disks, however.

COMPANY NAME: Vendor Independent   (999999)
SPECIAL FEATURE: Charts
DESCRIPTORS: **Database** Management; Parallel Processing; Program
    Development
REVISION DATE: 19990830

```
Set     Items     Description
S1      491092    QUER? OR SEARCH? OR REQUEST?
S2        9013    (PLURAL? OR VARIOUS OR SEVERAL OR MULTIPL? OR MANY OR NUME-
                  ROUS OR UNLIMITED)(2N)(DATA()BASE? OR DATABASE?)
S3       16207    PREDICATE?
S4          17    S3 (2N)(DICTIONAR? OR GLOSSAR? OR LEXICON? OR VOCABULAR? OR
                  WORDBOOK?)
S5          117   (STRENGTH OR WEIGHT OR SIGNIFICANCE OR INFLUENCE OR IMPORT-
                  ANCE) (10N) S3
S6      416377    DATABASE? OR DATA()BASE?
S7     1334361    PARTITION? OR PARSE OR PARSING OR SPLIT? OR DIVIDE? OR SEC-
                  TION? OR SEGMENT? OR SEPARATE? (5N) S1
S8       22682    (OPTIMIZ? OR PERFECT? OR FUNCTION? OR EFFECTIVE? OR EFFICI-
                  ENT?)(2N)S1
S9           0    S4 AND S5
S10        592    S7 AND S2
S11         37    S10 AND S8
S12          0    S10 AND S4
S13          0    S10 AND S5
S14          0    S2 AND S4
S15          0    S2 AND S5
S16          2    S8 AND S5
S17          0    S8 AND S4
S18         39    S11 OR S16
S19         39    S18 NOT PY>2001
S20         39    S19 NOT PD>20010228
S21         33    RD (unique items)
File    8:Ei Compendex(R) 1970-2003/Nov W5
          (c) 2003 Elsevier Eng.  Info. Inc.
File   35:Dissertation Abs Online 1861-2003/Oct
          (c) 2003 ProQuest Info&Learning
File  202:Info. Sci. & Tech. Abs. 1966-2003/Nov 17
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File  233:Internet & Personal Comp. Abs. 1981-2003/Jul
          (c) 2003, EBSCO Pub.
File   94:JICST-EPlus 1985-2003/Dec W1
          (c)2003 Japan Science and Tech Corp(JST)
File   99:Wilson Appl. Sci & Tech Abs 1983-2003/Oct
          (c) 2003 The HW Wilson Co.
File   95:TEME-Technology & Management 1989-2003/Nov W4
          (c) 2003 FIZ TECHNIK
File  583:Gale Group Globalbase(TM) 1986-2002/Dec 13
          (c) 2002 The Gale Group
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05777572   E.I. No: EIP01025505383
   Title: **Performance analysis of parallel query processing algorithms for object-oriented databases**
   Author: Su, Stanley Y.W.; Ranka, Sanjay; He, Xiang
   Corporate Source: Univ of Florida, Gainesville, FL, USA
   Abstract: In recent years, parallel processing and optimization algorithms for processing object-oriented databases have drawn a considerable amount of attention from the database research community. Two general types of algorithms have been introduced: hybrid-hash pointer-based algorithms and multiwavefront algorithms. In this work, we quantitatively analyze the two algorithms and develop analytical formulas to capture the main performance features of these two approaches. We study their performance in three application environments: One is characterized by large **databases** having **many** object classes, each of which contains a large number of instances; the second one is characterized by large **databases** having **many** object classes, each of which contains a relatively small number of instances; and the third one is by large databases having object classes of varying sizes. A horizontal data **partitioning** strategy, in which each object class is **partitioned** into horizontal **segments** stored across all processors, is used in the first environment. A class-per-node assignment strategy, in which instances of each object class are stored in a single processor, is used in the second environment. In the third environment, object classes are **partitioned** horizontally and assigned to a varying number of processors depending on their different sizes. Our analytical results show that the multiwavefront algorithm has three distinguishing features which contribute to its better performance: 1) two-phase processing strategy, 2) vertical **partitioning** of horizontal **segments** , and 3) dynamic determination of 'collision point' in multiwavefront propagations which results in an **optimized   query** execution plan. We show that if these features are adopted by a hybrid-hash, pointer-based algorithm, its performance will be comparable with that of the multiwavefront algorithm because the difference in CPU time between them is negligible. The assumed computing environment is a network of workstations having a share-nothing architecture. The schema and some queries selected from the OO7 benchmark are used in the performance analyses and comparisons. The queries are modified slightly in different data environments in order to reflect the features of diverse database applications. (Author abstract) 27 Refs.
   Descriptors: *Query languages; Algorithms; Parallel processing systems; Performance; Response time (computer systems); Computer workstations; Computer architecture
   Identifiers: Object oriented databases; Parallel query processing algorithms; Hybrid hash pointer based algorithms; Multiwavefront algorithms ; Data **partitioning** strategy; Performance analysis
   Classification Codes:
   723.3 (Database Systems); 722.4 (Digital Computers & Systems); 723.5 (Computer Applications).
   723 (Computer Software); 722 (Computer Hardware)
   72 (COMPUTERS & DATA PROCESSING)

05719244   E.I. No: EIP00125426260

Title: **Restructuring** partitioned **normal form relations without information loss**

Author: Vincent, Millist W.; Levene, Mark
Corporate Source: Univ of South Australia, Adelaide, Australia

Abstract: Nested relations in **partitioned** normal form (PNF) are an important subclass of nested relations that are useful in many applications. In this paper we address the question of determining when every PNF relation stored under one nested relation scheme can be transformed into another PNF relation stored under a different nested relation scheme without loss of information, referred to as the two schemes being data equivalent. This issue is important in **many database** application areas such as view processing, schema integration, and schema evolution. The main result of the paper provides two characterizations of data equivalence for nested schemes. The first is that two schemes are data equivalent if and only if the two sets of multivalued dependencies induced by the two corresponding scheme trees are equivalent. The second is that the schemes are equivalent if and only if the corresponding scheme trees can be transformed into the other by a sequence of applications of a local restructuring operator and its inverse. (Author abstract) 29 Refs.

Descriptors: Relational database systems; **Query** languages; **Optimization** ; User interfaces
Identifiers: Nest
Classification Codes:
723.1.1   (Computer Programming Languages)
723.3   (Database Systems); 723.1   (Computer Programming); 921.5 (Optimization Techniques); 722.2   (Computer Peripheral Equipment)
723   (Computer Software); 921   (Applied Mathematics); 722   (Computer Hardware)
72   (COMPUTERS & DATA PROCESSING); 92   (ENGINEERING MATHEMATICS)

21/5/3   **(Item 3 from file: 8)**

05617287   E.I. No: EIP00085272621
Title: **Semantic broadcast scheme for** a **mobile environment based on dynamic chunking**

Author: Lee, Ken C.K.; Leong, Hong Va; Si, Antonio
Corporate Source: Hong Kong Polytechnic Univ, Hong Kong

Abstract: Data **broadcast** is an effective approach to disseminate information from a **database server** to **numerous** mobile clients in a mobile environment. Since a broadcast session contains only a subset of the database items, a client might not be able to obtain all its items from the broadcast and is forced to request additional ones from the server on demand. In this paper, we describe a semantic-based broadcast approach which attaches a semantic description to each broadcast unit, called chunk, which is a cluster of data items. This allows a client to determine if a query can be answered entirely using a broadcast as well as defining the

precise nature of the remaining items in the form of a 'supplementary' query . Chunks could be of different sizes and are hierarchically organized. We propose a heuristic to schedule the broadcast order of the chunks to improve the tuning time, access time, and a new metric called data affinity index. The performances are evaluated via experiments based on a simulation model. (Author abstract) 16 Refs.

Descriptors: Data communication systems; Client server **computer** systems ; Mobile computing; Distributed database systems; Query languages; Computer simulation

Identifiers: Dynamic chunking; Semantic based broadcast

Classification Codes:

723.2 (Data Processing); 722.4 (Digital Computers & Systems); 723.3 (Database Systems); 723.5 (Computer Applications)

723 (Computer Software); 722 (Computer Hardware)

72 (COMPUTERS & DATA PROCESSING)

21/5/4 (Item 4 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

05484003 E.I. No: EIP00025039026
Title: **Influence of data set** splitting **methods on similarity indexing performance**

Author: Bai, Xuesheng; Xu, Guangyou; Shi, Yuanchun; Yang, Shiqiang

Corporate Source: Tsinghua Univ, Beijing, China

Conference Title: Proceedings of the 2000 'Storage and Retrieval for Media Databases 2000'

Conference Location: San Jose, CA, USA Conference Date: 19000126-19000128

Sponsor: IS and T; SPIE

E.I. Conference No.: 56354

Source: Proceedings of SPIE – The International Society for Optical Engineering v 3972 2000. p 76-83

Publication Year: 2000

CODEN: PSISDG ISSN: 0277-786X

Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 0004W1

Abstract: Similarity indexing is the supporting technology for fast content-based retrieval of large media **databases** , and **many** similarity index structures have been proposed. Compared with the many structures present, less attention has been paid to performance evaluation of index structures and theoretic analysis on factors influencing index performance. In this paper, we attempt to solve part of the problem and focus our research on analyzing the influence of data **splitting** methods. To give a formal definition for index structure performance evaluation, we introduce the query distribution probability concept and propose using average search cost to evaluate the performance of a similarity indexing structure. We choose the simplest case of similarity indexing – nearest-neighbor search in our discussion and deduce an expression for the average **search** cost **function** . Based on analysis of the expression, we proposed some criteria that may be useful in index design and implementation. Then we extend these conclusions to the general similarity indexing case and use these criteria as general rules in index design and implementation. Basic thoughts and analysis are detailed, as well as experiment results. (Author abstract) 12 Refs.

Descriptors: *Indexing (of information); Database systems; Multimedia systems; Information retrieval; Data structures; Probability distributions; Data reduction; Response time (computer systems); Computer systems programming

Identifiers: Data set **splitting** methods; Similarity indexing; Query distribution probability

Classification Codes:

903.1 (Information Sources & Analysis); 723.3 (Database Systems); 723.5 (Computer Applications); 903.3 (Information Retrieval & Use); 723.2 (Data Processing); 922.1 (Probability Theory)

21/5/5   (Item 5 from file: 8)

05412722   E.I. No: EIP99114893553
   Title: **New access index for fast execution of conjunctive queries over text data**
   Author: Yang, Yuping; Singhal, Mukesh
   Corporate Source: Ohio State Univ, Columbus, OH, USA
   Conference Title: .Proceedings of. the 1999 International Database Engineering and Application Symposium, IDEAS'99
   Conference Location: Montreal, Que, Can Conference Date: 19990802-19990804
   Sponsor: Concordia University
   E.I. Conference No.: 55503
   Source: Proceedings of the International Database Engineering and Applications Symposium, IDEAS 1999. p 248-253
   Publication Year: 1999
   CODEN: 002754
   Language: English
   Document Type: JA; (Journal Article)   Treatment: T; (Theoretical)
   Journal Announcement: 9912W3
   Abstract: Complex queries with multiple conjunctive (AND) **predicates** have attracted increasing attention for their **importance** in OLAP systems. Signature index is ideal for fast execution of queries involving multiple conjunctive predicates. However, previous signature-based methods did not separate the signatures from different attributes. We developed a signature augmented access index MG-tree. It's main features are: (1) it is a light-weight search tree for indexing multiple attributes of text data, (2) it eliminates the mix of signatures from different attributes, so the construction and maintenance of the index is easy and **search** is **efficient** . Our analyses and experiments show that the MG-tree achieved a significant improvement in terms of access speed and storage space overhead over both tree-like indexes and previous multi-dimensional signature indexes, and is easier to build and maintain. MG-tree can be employed in practical DBMS implementations. (Author abstract) 12 Refs.
   Descriptors: *Query languages; Data structures; Indexing (of information) ; Online searching; Database systems; Data processing
   Identifiers: MG-tree; Signature augmented access index
   Classification Codes:
   723.2 (Data Processing); 723.3 (Database Systems); 903.1 (Information Sources & Analysis); 903.3 (Information Retrieval & Use)
   723 (Computer Software); 903 (Information Science)
   72 (COMPUTERS & DATA PROCESSING); 90 (GENERAL ENGINEERING)

21/5/6   (Item 6 from file: 8)

05085926   E.I. No: EIP98084331475
   Title: **Graph-based parallel** query **processing and** optimization **strategies for object-oriented databases**
   Author: Su, Stanley Y.W.; Huang, Ying; Akaboshi, Naoki
   Corporate Source: Univ of Florida, Gainesville, FL, USA
   Source: Distributed and Parallel Databases v 6 n 3 Jul 1998. p 247-285
   Publication Year: 1998
   CODEN: DAATES   ISSN: 0926-8782
   Language: English
   Document Type: JA; (Journal Article)   Treatment: A; (Applications); T; (Theoretical)

Abstract: Much work has been accomplished in the past on the subject of parallel **query** processing and **optimization** in parallel relational database systems; however, little work on the same subject has been done in parallel object-oriented database systems. Since the object-oriented view of a database and its processing are quite different from those of a relational system, it can be expected that techniques of parallel **query** processing and **optimization** for the latter can be different from the former. In this paper, we present a general framework for parallel object-oriented **database** systems and **several** implemented **query** processing and **optimization** strategies together with some performance evaluation results. In this work, multiwavefront algorithms are used in query processing to allow a higher degree of parallelism than the traditional tree-based **query** processing. Four **optimization** strategies, which are designed specifically for the multiwavefront algorithms and for the optimization of single as well as multiple queries, are introduced. The query processing algorithms and optimization strategies have been implemented on a parallel computer, nCUBE2; and the results of a performance evaluation are presented in this paper. The main emphases and the intended contributions of this paper are (1) data **partitioning** , **query** processing and **optimization** strategies suitable for parallel OODBMSs, (2) the implementation of the multiwavefront algorithms and optimization strategies, and (3) the performance evaluation results. (Author abstract) 54 Refs.
Descriptors: *Database systems; Object oriented programming; Parallel processing systems; Parallel algorithms; Optimization; Graph theory; Performance
Identifiers: Parallel object oriented database systems; Query processing algorithm; Multiwavefront algorithm
Classification Codes:
723.3 (Database Systems); 723.1 (Computer Programming); 722.4 (Digital Computers & Systems); 921.5 (Optimization Techniques); 921.4 (Combinatorial Mathematics, Includes Graph Theory, Set Theory)
723 (Computer Software); 722 (Computer Hardware); 921 (Applied Mathematics)
72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

21/5/7   **(Item 7 from file: 8)**

04202753   E.I. No: EIP95072769152
Title: Efficient signature file methods for text retrieval
Author: Lun Lee, Dik; Kim, Young Man; Patel, Gaurav
Corporate Source: Ohio State Univ, Columbus, OH, USA
Abstract: Signature files have been studied extensively as an access method for textual **databases** . **Many** approaches have been proposed for **searching** signatures files **efficiently** . However, different methods make different assumptions and use different performance measures, making it difficult to compare their performance. In this paper, we study three basic methods proposed in the literature, namely, the indexed descriptor file, the two-level super-imposed coding scheme, and the **partitioned** signature file approach. The contribution of this paper is two-fold. First, we present a uniform analytical performance model so that the methods can be compared fairly and consistently. The analysis shows that the two-level superimposed coding scheme, if stored in a transposed file, has the best performance. Second, we extend the two-level superimposed coding method into a multilevel superimposed coding method, we obtain the optimal number of levels for the multilevel method and show that for databases with

reasonable size the optimal value is much larger than 2, which is assumed
in the two-level method. The accuracy of the analytical formula is
demonstrated by simulation. (Author abstract) 21 Refs.

Descriptors: *Information retrieval; File organization; Encoding
(symbols); Performance; Computer simulation; Data storage equipment;
Probability; Database systems

Identifiers: Signature file method; Text retrieval; Multilevel
superimposed coding; Access methods

Classification Codes:

903.3 (Information Retrieval & Use); 723.2 (Data Processing); 723.5
(Computer Applications); 722.1 (Data Storage, Equipment & Techniques);
922.1 (Probability Theory); 723.3 (Database Systems)

903 (Information Science); 723 (Computer Software); 722 (Computer
Hardware); 922 (Statistical Methods)

90 (GENERAL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 92
(ENGINEERING MATHEMATICS)

21/5/8 **(Item 8 from file: 8)**
DIALOG(R)File 8:Ei Compendex(R)

03755902 E.I. No: EIP93121142486

**Title: Survey of parallel execution strategies for transitive closure and
logic programs**

Author: Cacace, Filippo; Ceri, Stefano; Houtsma, Maurice
Corporate Source: Politecnico di Milano, Milano, Italy

Document Type: JA; (Journal Article) Treatment: A; (Applications); T;
(Theoretical)

Journal Announcement: 9401W4

Abstract: An important feature of database technology of the nineties is
the use of parallelism for speeding up the execution of complex queries.
This technology is being tested in **several** experimental **database**
architectures and a few commercial systems for conventional
select-project-join queries. In particular, hash-based fragmentation is
used to distribute data to disks under the control of different processors
in order to perform selections and joins in parallel. With the development
of new query languages, and in particular with the definition of transitive
closure queries and of more general logic programming queries, the new
dimension of recursion has been added to query processing. Recursive
queries are complex; at the same time, their regular structure is
particularly suited for parallel execution, and parallelism may give a high
efficiency gain. We survey the approaches to parallel execution of
recursion queries that have been presented in the recent literature. We
observe that research on parallel execution of recursive **queries** is
separated into two distinct subareas, one focused on the transitive
closure of Relational Algebra expressions, the other one focused on
optimization of more general Datalog queries. Though the subareas seem
radically different because of the approach and formalism used, they have
many common features. This is not surprising, because most typical Datalog
queries can be solved by means of the transitive closure of simple
algebraic expressions. We first analyze the relationship between the
transitive closure of expressions in Relational Algebra and Datalog
programs. We then review sequential methods for evaluating transitive
closure, distinguishing iterative and direct methods. We address the
parallelization of these methods, by discussing various forms of
parallelization. Data fragmentation plays an important role in obtaining
parallel execution; we describe hash-based and semantic fragmentation.
Finally, we consider Datalog queries, and present general methods for
parallel rule execution; we recognize the similarities between these
methods and the methods reviewed previously, when the former are applied to
linear Datalog queries. We also provide a quantitative analysis that shows
the impact of the initial data distribution on the performance of methods.

(Author abstract) 68 Refs.
Descriptors: *Relational database systems; Parallel processing systems;
Logic programming; Query languages; Data transfer; Boolean algebra;
Recursive functions; Algorithms; Optimization; Program processors
Identifiers: Parallel algorithms; Transitive closure; Logic programs;
Datalog programs; Query processing; Hash based fragmentation; **Query
optimization** ; Recursion; Deductive databases; Relational algebra
Classification Codes:
723.2 (Data Processing); 723.1 (Computer Programming); 921.1 (Algebra)
; 721.1 (Computer Theory, Includes Formal Logic, Automata Theory,
Switching Theory, Programming Theory); 722.4 (Digital Computers & Systems)
723 (Computer Software); 921 (Applied Mathematics); 721 (Computer
Circuits & Logic Elements); 722 (Computer Hardware)
72 (COMPUTERS & DATA PROCESSING); 92 (ENGINEERING MATHEMATICS)

21/5/9   (Item 9 from file: 8)
DIALOG(R)File   8:Ei Compendex(R)
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03622365   E.I. No: EIP93020715014
   Title: **Semantic query processing in multidatabase systems: a logic-based
approach**
   Author: Pan, Miin-Jeng; Chang, Shi-Kuo; Yang, Chien-Chiao
   Corporate Source: Natl Taiwan Inst of Technology, Taiwan
   Conference Title: Proceedings of the Third Workshop on Future Trends of
Distributed Computing Systems
   Conference Location: Taipei, Taiwan   Conference Date: 19910414
   Sponsor: IEEE
   E.I. Conference No.: 17752
   Source: Proceedings of the Third Workshop on Future Trends of Distributed
Computing Systems Proc Third Workshop Future Trends Distrib Comput Syst
1992. Publ by IEEE, Computer Society, Los Alamitos, CA, USA. p 318-324
   Publication Year: 1992
   ISBN: 0-8186-2755-7
   Language: English
   Document Type: CA; (Conference Article)   Treatment: T; (Theoretical)
   Journal Announcement: 9306W3
   Abstract: A multidatabase system (MDBS) is a system that integrates the
operational data of **several** autonomous **database** systems and provide a
uniform interface and control mechanisms to control access to those data.
To efficiently retrieve and manipulate the data stored in MDBS, a metadata
dictionary is needed as a repository of essential information for
reasoning, controlling, and maintaining the retrieval/manipulation
processes. In this paper we developed a two-level active metadata
dictionary approach based on logic for building a metadata dictionary,
query processing, and maintenance in MDBS. The low-level metadata
dictionaries (LLMDs) keep metadata for each corresponding local database in
MDBS, respectively. The high-level metadata dictionary (HLMD) integrates
the metadata about all LLMDs. The evaluation strategy is a top-down
approach, start with consideration of a query as a global goal to be
achieved. Unify the query with rules successively to decompose the goal
into subgoals which can be evaluated against extensional database. Then
translate these subgoals into corresponding queries against underlying
DBMSs, respectively. The database integration strategy includes two phases:
schema translation and schema integration. It is a bottom-up approach
integrating schema from the underlying database schemas. Update may cause
inconsistencies in MDBS. We use incremental integrity constraint checking
to preserve consistency. The semantic **query   optimization** evaluation can
be **partitioned** into two phases: compilation phase and evaluation phase.
During the compilation phase residues are computed and associated with
deductive rules through partial subsumption algorithm. In evaluation phase,
redundant residues are eliminated and then translate it into query against
underlying DBMS. (Author abstract) Refs.
   Descriptors: *Distributed database systems; Algorithms
   Identifiers: Query processing; Dictionaries; Semantic query processing;
Multidatabase systems; Metadata dictionaries; Integrity constraint checking

; **Query   optimization**
Classification Codes:
723.3   (Database Systems); 723.1   (Computer Programming)
723   (Computer Software)
72   (COMPUTERS & DATA PROCESSING)

 21/5/10   (Item 1 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online
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01888101   ORDER NO: AADAA-IMQ68268
Distributed FASTA searching on a server network
  Author: Peng, Jian
  Degree: M.C.S.
  Year: 2001
  Corporate Source/Institution: The University of New Brunswick (Canada) (
        0823)
  Adviser: Patricia Evans
  Source: VOLUME 40/06 of MASTERS ABSTRACTS.
        PAGE 1553.   130 PAGES
  Descriptors: COMPUTER SCIENCE
  Descriptor Codes: 0984
  ISBN: 0-612-68268-4

     DNA/protein sequence comparison, usually organized as a database
search, is a very powerful tool in modern molecular biology. In recent
years, the rapid growth of sequence databases in their size as well as in
their number poses demands for **efficient** programs to **search** these
databases. In this thesis a distributed system capable of performing
sequence searches on **multiple** biological **databases** simultaneously has
been designed, implemented and tested.
     The two-phase nature of FASTA algorithm makes it the algorithm of the
choice to be modified for our distributed system. The system is built on a
three-tier architecture to support a flexible, expendable, and most
importantly, user transparent server network. The system is capable of
searching multiple homogeneous and heterogeneous databases in a single
query. Also, it can handle concurrent multiple client connections.
     In summary, the work accomplished in this thesis has demonstrated that
the performance of sequence queries on **multiple** biological **databases**
can be significantly improved if a distributed algorithm is used, compared
to running uncoordinated parallel searches on these individual databases.
It also shows that the usability of existing biological databases and
database search programs can be greatly enhanced if **multiple   databases**
can be queried simultaneously, as one logical database, because users
obtain the search results in one compiled report, which is not available if
they run the **searches   separately** on individual databases. Moreover,
this thesis demonstrates that the Client/Server computing model used in
biological database queries can greatly expand the possibilities to build a
centralized biological data warehouse to facilitate multiple remote client
requests through the Internet.

 21/5/11   (Item 2 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online
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01847279   ORDER NO: AADAA-I3024413
Efficient retrieval and scalable storage of multi-dimensional data
  Author: Ferhatosmanoglu, Hakan
  Degree: Ph.D.
  Year: 2001
  Corporate Source/Institution: University of California, Santa Barbara (
        0035)
  Chairs: Divyakant Agrawal; Amr El Abbadi
  Source: VOLUME 62/08-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
        PAGE 3687.   235 PAGES

Databases increasingly integrate different types of information such as multimedia data. As a result, it is becoming necessary to support efficient storage and retrieval of multi-dimensional data. In **several** modern **database** applications, both the dimensionality and the amount of data that needs to be processed are increasing rapidly. Therefore, it is important to develop techniques that overcome the scalability and the dimensionality problems of multi-dimensional data sets. Since the amount of data is large, it is crucial to develop techniques that exploit parallelism in large-scale databases. In this context, we propose **partitioning** and declustering techniques for multi-disk architectures. Several effective solutions for the high dimensionality problem are also proposed: access structures for **efficient searching** , and dimensionality reduction techniques to remove the curse of dimensionality. In particular, we propose a compression based index structure, a clustering based approximate search technique, and a dimensionality reduction technique using inner product approximations. Finally, we discuss two new types of **queries** and propose **efficient** techniques to process them. Extensive experimental evaluation of all presented techniques has been performed and comparison with other state-of-the-art approaches is presented.

Indexing techniques for similarity searches in sequence databases

Similarity searches in sequence databases are important in many application domains such as information retrieval, data mining, and clustering. Although sequential scanning can be used to perform similarity searches, it may require enormous processing time over large sequence **databases** . Recently, **several** indexing techniques have been proposed to speed up the processing of similarity searches.

Most of the previous techniques use the Euclidean distance metric as a similarity measure. However, in many applications, the sampling rates and the lengths of sequences may be different, making it difficult or impossible to use the Euclidean distance metric. In the area of speech recognition, this problem has been approached using the similarity measure, called the time warping distance, which allows sequences to be stretched or compressed along the time axis.

In this dissertation, we investigate a set of indexing techniques for the fast retrieval of similar (sub)sequences of different lengths or different sampling rates. The goal of our approach is to achieve the high search performance without missing any qualified answers.

We first propose a whole sequence searching method, which extracts a time-warping invariant feature vector from each sequence and uses a lower-bound time warping distance function to compute the distance of any two feature vectors. The proposed method **efficiently** performs similarity **search** using a multi-dimensional index built on the set of feature vectors.

We then propose a subsequence searching method, which uses a

disk-based suffix tree as an index structure and employs lower-bound time
warping distance functions to filter out dissimilar subsequences. To make
the index structure compact and thus accelerate the query processing, the
proposed method introduces the categorization and sparse indexing schemes.
    For a database with long data sequences, we propose a **segment** -based
subsequence searching scheme which changes the similarity measure from time
warping to piece-wise time warping in order to reduce the number of
possible subsequences to be compared. For a database with multi-dimensional
data sequences such as image sequences and video streams, we extend the
proposed techniques by introducing the multi-dimensional time warping
distance function. Finally, we apply the proposed subsequence searching
techniques to the problem of discovering and matching sequential
association rules.

21/5/13   (Item 4 from file: 35)

A multimedia data model with generalized stream constructs

    Several   database modeling and querying innovations are introduced
in a stream-based multimedia database system. The data model
advances/builds on prior work, focusing on the use of
<italic>streams</italic> for storing temporally ordered sequences of
information. New stream constructs are introduced and formalized, allowing
manipulation and organization of streams: <italic> substreams</italic>,
enabling users to define logical **partitions** of information within a
stream using conditions specified on its contents; <italic>aggregated
streams</italic>, generalizing the operation of combining two or more
streams into one entity through a function stipulating aggregation
behavior; and <italic> derived streams</italic>, generated through the
application of a method to one or more streams. <italic>Stream
relationships</italic>, expressing relations between streams and other
database objects, are also developed. Formal notation and algorithms for
supporting these constructs are developed. The stream constructs complement
existing object-oriented database models, and increase the overall
capability in multimedia data representation.
    Querying facilities have been developed to support the stream
constructs. The beginnings of a new stream algebra are described, defining
stream constructs and basic operations required for querying. The stream
algebra also sets the foundation for exploring **optimization** of **queries**
involving streams. An extended visual query language for the new constructs
is also illustrated, with operators supporting set and temporal predicates
on streams, and a grouping mechanism to reduce graphical complexity. The
visual query language additionally enables creation of views on streams by
permitting customization of queries for different user models.
Investigation of indexing to support querying of the constructs was
performed; use of these methods is examined to optimize retrieval and other
query processing operations.
    To validate the work, an integrated multimedia application, <italic>
TimeLine</italic>, has been developed in the medical domain. Patient
information in different clinical databases is re-organized in accordance
to a stream-based schema. TimeLine facilitates the longitudinal view of
patient's medical histories, presenting physicians with a problem-oriented

temporal visualization of data.

Preliminary user testing and evaluation were performed. Users'
comprehension of the data modeling and visual querying concepts was tested.
TimeLine was also evaluated, measuring its impact on physicians and the
acceptance of the interface relative to the current clinical environment.
Results from the evaluations were positive overall.

21/5/14   (Item 5 from file: 35)

01681364 ORDER NO: AAD99-13888
**AN INTELLIGENT CACHE MANAGER IN DATA WAREHOUSING ENVIRONMENT AND ITS
APPLICATION TO THE WEB CACHING (WORLD WIDE WEB)**
Author: SHIM, JUNHO
Degree: PH.D.
Year: 1998
Corporate Source/Institution: NORTHWESTERN UNIVERSITY (0163)
Adviser: PETER SCHEUERMANN
Source: VOLUME 59/12-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
         PAGE 6385. 106 PAGES
Descriptors: COMPUTER SCIENCE
Descriptor Codes: 0984

A data warehouse is a stand-alone repository of information consisting
of “interesting” and “historic” data from **several**
, heterogeneous, operational **databases** , and the size of data warehouse is
very large and grows over time. Data warehouses are usually dedicated to
the processing of queries issued by decision support systems (DSS). The
response time of DSS queries is typically several orders of magnitude
higher than the response time of OLTP (OnLine Transaction Processing)
queries. Since DSS queries are often submitted interactively, techniques
for reducing their response time are important.

The caching of query results is one such technique particularly well
suited to the DSS environment. In this thesis, we present an intelligent
cache manager for such an environment. The cache manager can lookup queries
either based on an exact query match or using a <italic>query **split**
</italic> algorithm to **efficiently** find **query** results which subsume the
submitted query. The cache manager dynamically maintains the cache content
by deciding whether a new query result should be admitted to the cache and
if so, which query results should be evicted from the cache. The decisions
are aimed at minimizing query response time. The decisions are based on the
execution cost of each query, the size of each query result, the reference
frequency to each result, the cost of maintenance of each result due to
updates of the base tables, and the frequency of updates. Experimental
evaluation shows that the manager can significantly improve performance
when compared to similar systems.

Since Web documents vary in their size, and the cost of their
materialization depends upon the network delays, a profit based cache
replacement algorithm can be applied to Web caching. At the same time, the
cache must guarantee some form of consistency of the cached documents.
Cache consistency algorithms enforce appropriate guarantees about the
staleness of the cached documents. We have developed a unified cache
maintenance algorithm which integrates both cache replacement and
consistency algorithms. A trace-driven experimental study shows that the
unified algorithm not only improves the average response time but also
reduces the significant number of stale documents returned to the clients.

21/5/15   (Item 6 from file: 35)

01566823 ORDER NO: AAD97-23169
QUERY PROCESSING IN TERTIARY MEMORY DATABASES
Author: SARAWAGI, SUNITA

This thesis presents the design and implementation of a database query processing engine that is optimized for access to tertiary memory devices. Tertiary memory devices provide a cost-effective solution for handling the on-going information explosion. While cheap and convenient, they pose new optimization challenges. Not only are tertiary devices three orders of magnitude slower than disks, but they also have a highly non-uniform access latency. Therefore, it is crucial to carefully reduce and reorder I/O on tertiary memory using **effective query** scheduling, batching, caching, prefetching and data placement techniques.

We make two key modifications to an existing query processing architecture to support such aggressive optimizations: The first is a scheduler that uses system-wide information to make query scheduling, caching and device scheduling decisions in an integrated manner. The second is a reorderable executor that can process each query plan in the order in which data is made available by the scheduler rather than demand and process data in a fixed order, as in most conventional query execution engines. The two together provide unprecedented opportunities for optimizing accesses to tertiary memory. We have extended the scPOSTGRES database system with these optimizations. Measurements on the prototype yielded almost an order of magnitude improvement on the scSEQUOIA-2000 benchmark and on queries over synthetic datasets.

We explore data placement techniques on tertiary memory devices to enable better clustering. This thesis concentrates on data placement issues for large multidimensional arrays--one of the largest contributors of data volume in **many database** systems. We discuss four techniques for doing this: (1) storing the array in multidimensional "chunks" to minimize the number of blocks fetched, (2) reordering the chunked array to minimize seek distance between accessed blocks, (3) maintaining redundant copies of the array, each organized for a different chunk size and ordering and (4) **partitioning** the array onto platters of a tertiary memory device so as to minimize the number of platter switches. Measurements on data obtained from global change scientists show that accesses on arrays organized using these techniques are often an order of magnitude faster than on the unoptimized data.

Distributed database technology is expected to have a significant impact on data processing in the upcoming years because distributed **database** systems have **many** potential advantages over centralized systems for geographically distributed organizations. Data allocation and **query optimization** are two of the most important aspects of distributed database

design. Data allocation involves placing a database and the applications
that run against it in the multiple sites of a network. It is a very
complex problem consisting of two processes: data fragmentation and
fragment allocation. Data fragmentation involves the **partitioning** of each
relation into a group of fragment relations while fragment allocation deals
with the distribution of these fragmented relations across the sites of the
distributed system. **Query optimization** includes designing algorithms
that analyze and convert queries into a set of data manipulation
operations. Both the data allocation and **query optimization** problems
are NP-hard in nature and notoriously difficult to solve. We have attempted
to combine the two highly interrelated and interactive decision processes
in data allocation by formulating them as integer programs taking into
consideration different·constraints and·under various assumptions. Various
solution methods are discussed and a new linearization method is
investigated. We next analyze the **query optimization** problem and reduce
it to a join ordering problem. Several heuristics and a genetic algorithm
have been developed for solving the join ordering problem. Some
computational experiments on these algorithms were conducted and solution
qualities compared. The computation experiments show that the suggested
linearization method performs clearly and consistently better than a
currently widely used method and that heuristics and genetic algorithms are
viable methods for solving **query optimization** problem.

It is anticipated that the models and solution methods developed in
this study for data allocation and **query optimization** in distributed
database systems may be of practical as well as theoretical use.
Nevertheless, much more needs to be done to solve the distributed database
design problems in order to achieve its potential benefits. Our models and
solution methods can be the starting point for eventual resolution of these
complex problems in large scale distributed database systems.

DATA PARTITIONING , QUERY **PROCESSING AND** OPTIMIZATION **TECHNIQUES FOR
PARALLEL OBJECT-ORIENTED DATABASES (RELATIONAL DATABASES)**

Much work has been accomplished in the past on the subject of parallel
query processing and **optimization** in parallel relational database
systems. However, little work on the same subject has been done in parallel
object-oriented database systems. Since the object-oriented view of a
database· and its processing are quite different ·from those of a relational
system, it can be expected that techniques of parallel **query** processing
and **optimization** for the latter can be different from the former. In this
dissertation, we present two parallel architectures, a general framework
for parallel object-oriented **database** systems, **several** implemented
query processing and **optimization** strategies together with some
performance evaluation results. In this work, multi-wavefront algorithms
are used in query processing to allow a higher degree of parallelism than
the traditional tree-based **query** processing. Four **optimization**
strategies, which are designed specifically for the multi-wavefront
algorithms and for the optimization of single as well as multiple queries,
are introduced and evaluated. A distributed result collection scheme which
is designed to support retrieval queries is also introduced. Furthermore,
two parallel architectures, namely, master-slave and peer-to-peer
architectures are compared. A comparison is also made for two data

placement strategies, namely, class-per-node vertical **partitioning** and hybrid **partitioning** . The query processing algorithms, four optimization strategies and the distributed result collection scheme have been implemented on a parallel computer nCUBE2, and the results of a performance evaluation are presented in this dissertation. The main emphases and the intended contributions of this dissertation are (1) data **partitioning** , parallel architecture, **query** processing, **query** **optimization** and result collection strategies suitable for parallel OODBMSs; (2) the implementation of these strategies; and (3) the performance evaluation results.

EXACT POSITIONING OF DATA APPROACH TO MEMORY MAPPED PERSISTENT STORES: DESIGN, ANALYSIS AND MODELLING (SECONDARY STORAGE)

     One. of the primary. functions of. computers is to store information, i.e., to deal with long lived or persistent data. Programmers working with persistent data structures are faced with the problem that there are two, mostly incompatible, views of structured data, namely data in primary and secondary storage. Traditionally, these two views of data have been dealt with independently by researchers in the programming language and database communities.
     Significant research has occurred over the last decade on efficient and easy-to-use methods for manipulating persistent data structures in a fashion that makes the secondary storage transparent to the programmer. Merging primary and secondary storage in this manner produces a single-level store, which gives the illusion that data on secondary storage is accessible in the same way as data in primary storage. In complex design environments, a single-level store offers substantial performance advantages over conventional file or database access. These advantages are crucial to unconventional database applications such as computer-aided design, text management, and geographical information systems. In addition, a single-level store reduces complexity in a program by freeing the programmer from the responsibility of dealing with two views of data.
     This dissertation proposes, develops and investigates a novel approach for implementing single-level stores using memory mapping. Memory mapping is the use of virtual memory to map data stored on secondary storage into primary storage so that the data is directly accessible by the processor's instructions. In this environment, all transfer of data to and from the secondary store takes place implicitly during program execution. The methodology was motivated by the significant simplification in expressing complex data structures offered by the technique of memory mapping. This work parallels other proposals that exploit the potential of memory mapping, but develops a unique approach based on the ideas of **segmentation** and exact positioning of data in memory. Rigorous experimentation has been conducted to demonstrate the effectiveness and ease of use of the proposed methodology vis-a-vis the traditional approaches of manipulating structured data on secondary storage.
     The behaviour of high-level database algorithms in the proposed memory mapped highly parallel environment, especially in systems, has been investigated. A quantitative analytical model of computation in this environment has been designed and validated through experiments conducted

on **several** **database** join algorithms; parallel multi-disk versions of
the traditional join algorithms were developed for this purpose. An
analytical model of the system is extremely useful for data structure and
algorithm designers for predicting general performance behaviour without
having to construct and test specific algorithms. More importantly, a
quantitative model is an essential tool for database subsystems such as a
query **optimizer** .

21/5/19   (Item 10 from file: 35)

941764   ORDER NO: AAD86-20494
**MULTIRELATIONS IN RELATIONAL DATABASES (DUPLICATES, ACYCLIC DATABASES,
FUNCTIONAL DEPENDENCIES, TABLEAUX)**
   Author: KLAUSNER, AVIEL
   Degree: PH.D.
   Year: 1986
   Corporate Source/Institution: HARVARD UNIVERSITY (0084)
   Source: VOLUME 47/10-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
         PAGE 4220. 112 PAGES
   Descriptors: COMPUTER SCIENCE
   Descriptor Codes: 0984

     In the relational data model a relation is a set of tuples; therefore
the same tuple cannot exist more than once in a relation. However, in
practice the need arises for relations with duplicates, called
multirelations. **Many** **database** systems, in coping with duplicates, are
inconsistent and ill-defined. The first part of this thesis provides a
theoretic and practical framework for integrating multirelations into
relational databases.
     We argue that a multirelation contains semantically incomplete
data, being a vertical **section** of the complete relation, a relation
without duplicates. The multirelation constitutes the output columns of the
complete relation and the rest are called hidden columns. The multirelation
partially describes the complete relation entities and is meaningful only
in the context of the complete relation.
     Accordingly, base relations or views should not be extended to
include multirelations. However, a multirelation serves naturally as query
output, where often partial information is desired. We define the notion of
full multirelational expressiveness as any meaningful query with
multirelational output (a multirelational query). Such a query specifies a
complete relation and designates its hidden and output columns. We show how
any relational query language can be extended to achieve full
multirelational query expressiveness, and we present a description of its
extension to the query language QUEL.
     We also show how to use tableau techniques to check equivalence
among conjunctive multirelational queries and how to minimize such queries.
In the presence of **functional** dependencies further **query** simplification
is possible using the chase process. The new conversion chase rule is
introduced which removes hidden columns from the complete relation of the
query and thus simplifies it.
     The second part of this thesis investigates database
fd-acyclicity. Acyclic schemes allow evaluation of join-project queries
using semijoin instead of join operations. In the presence of functional
dependencies some cyclic schemes acquire this property, and we address
recognizing these schemes.
     We present and prove an fd-acyclicity decision algorithm for an
important class of cyclic schemes called Acliques and an arbitrary set of
functional dependencies. We also suggest a decision algorithm for general
database schemes, based on the construction of the cycle space database
instance. (Abstract shortened with permission of author.)

21/5/20   (Item 1 from file: 202)

3102775
Database engine.
Author(s): Baum, R I; Brent, G.A.; Gibson, D.H.; Lindquist, D.B.
Patent Number(s): US 5548769
Publication Date: Aug 20, 1996
Language: English
Document Type: Patent
Record Type: Abstract
Journal Announcement: 3100

A processor functioning as a coprocessor attached to a central processing
complex provides efficient execution of the functions required for database
processing: sorting, merging, joining, searching and manipulating fields in
a host memory system. The specialized functional units: a memory interface
and field extractor/assembler, a Predicate Evaluator, a combined
sort/merge/join unit, a hasher, and a microcode control processor, are all
centered around a **partitioned** Working Store. Each functional unit is
pipelined and optimized according to the function it performs, and executes
its portion of the **query efficiently**. All **functional** units execute
simultaneously under the control processor to achieve the desired results.
Many different **database** functions can be performed by chaining simple
operations together. The processor can effectively replace the CPU bound
portions of complex database operations with functions that run at the
maximum memory access rate improving performance on complex queries.

Descriptors: Computers; Database management systems
Classification Codes and Description: 5.02 (Computer Systems General); 6.02
  (Bibliographic Search Services, Databases)
Main Heading: Information Processing and Control; Information Systems and
  Applications

 21/5/21   (Item 2 from file: 202)
DIALOG(R)File 202:Info. Sci. & Tech. Abs.

2801752
**Database sort and merge apparatus with multiple memory arrays having
alternating access.**
Author(s): Baum, R I; Brent, G.A.; Gibson, D.H.
Patent Number(s): US 5210870
Publication Date: May 11, 1993
Language: English
Document Type: Patent
Record Type: Abstract
Journal Announcement: 2800

A processor functioning as a coprocessor attached to a central processing
complex provides efficient execution of the functions required for database
processing: sorting, merging, joining, searching and manipulating fields in
a host memory system. The specialized functional units: a memory interface
and field extractor/assembler, a Predicate Evaluator, a combined
sort/merge/join unit, a hasher, and a microcoded control processor, are all
centered around a **partitioned** Working Store. Each functional unit is
pipelined and optimized according to the function it performs, and executes
its portion of the **query efficiently** . All **functional** units execute
simultaneously under the control processor to achieve the desired results.
Many different **database** functions can be performed by chaining simple
operations together. The processor can effectively replace the CPU bound
portions of complex database operations with functions that run at the
maximum memory access rate improving performance on complex queries.

Descriptors: Access; Array processors; Databases; Host computers
Classification Codes and Description: 6.02 (Bibliographic Search Services,

Databases); 5.00 (General Aspects)
Main Heading: Information Systems and Applications; Information Processing
and Control

21/5/22   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC
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7231122   INSPEC Abstract Number: C2002-05-6160-011
  Title: **The SH-tree: a super hybrid index structure for multidimensional
data**
  Author(s): Tran Khanh Dang; Kung, J.; Wagner, R.
  Author Affiliation: Inst. for Appl. Knowledge Process., Linz Univ.,
Austria
  Conference Title: Database and Expert Systems Applications. 12th
International Conference, DEXA 2001. Proceedings (Lecture Notes in Computer
Science Vol.2113)   p.340-9
  Editor(s): Mayr, H.C.; Lazansky, J.; Quirchmayr, G.; Vogel, P.
  Publisher: Springer-Verlag, Berlin, Germany
  Publication Date: 2001   Country of Publication: Germany   xix+991 pp.
  ISBN: 3 540 42527 6   Material Identity Number: XX-2001-02494
  Conference Title: Database and Expert Systems Applications. 12th
International Conference, DEXA 2001. Proceedings
  Conference Date: 3-5 Sept. 2001   Conference Location: Munich, Germany
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Practical (P)
  Abstract: Nowadays feature vector based similarity search is increasingly
emerging in **database** systems. Consequently, **many** multidimensional data
index techniques have been widely introduced to the database researcher
community. These index techniques are categorized into two main classes: SP
(space **partitioning**)/KD-tree-based and DP (data **partitioning**
)/R-tree-based. Recently, a hybrid index structure has been proposed. It
combines both SP/KD-tree-based and DP/R-tree-based techniques to form a
new, more efficient index structure. However, weaknesses are still existing
in techniques above. In this paper, we introduce a novel and flexible index
structure for multidimensional data, the SH-tree (Super Hybrid tree).
Theoretical analyses show that the SH-tree is a good combination of both
techniques with respect to both presentation and search algorithms. It
overcomes the shortcomings and makes use of their positive aspects to
facilitate **efficient** similarity **searches** .   (36 Refs)
  Subfile: C
  Descriptors: database indexing; tree data structures; very large
databases
  Identifiers: SH-tree; super hybrid index structure; multidimensional data
; feature vector based similarity search; index techniques; space
partitioning ; flexible index structure; SP/KD-tree-based techniques;
DP/R-tree-based techniques; bounding sphere; minimum bounding rectangle;
multimedia databases; time-series databases; CAD/CAM systems; medical image
databases; large databases; database systems; multidimensional data index
techniques
  Class Codes: C6160 (Database management systems (DBMS)); C6120 (File
organisation)
  Copyright 2002, IEE

21/5/23   (Item 2 from file: 2)
DIALOG(R)File   2:INSPEC
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6596708   INSPEC Abstract Number: C2000-06-6160B-046
  Title: **On efficiently implementing SchemaSQL on a SQL database system**
  Author(s): Lakshmanan, L.V.S.; Sadri, F.; Subramanian, S.N.
  Author Affiliation: IIT, Bombay, India
  Conference Title: Very Large Data Bases. Proceedings of the Twenty-Fifth
International Conference on Very Large Data Bases   p.471-82
  Editor(s): Atkinson, M.; Orlowska, M.E.; Valduriez, P.; Zdonik, S.;

Brodie, M.
   Publisher: Morgan Kaufmann Publishers, Orlando, FL, USA
   Publication Date: 1999 Country of Publication: USA   xviii+761 pp.
   Material Identity Number: XX-1999-02812
   Conference Title: Proceedings of 25th International Conference on Very
Large Databases
   Conference Sponsor: Oracle; Sun Microsys.; IBM; Microsoft SQLServer7.0;
Scottish Widows
   Conference Date: 7-10 Sept. 1999   Conference Location: Edinburgh, UK
   Language: English   Document Type: Conference Paper (PA)
   Treatment: Practical (P); Theoretical (T); Experimental (X)

   Abstract: SchemaSQL is a recently proposed extension to SQL for enabling
multi- **database** interoperability. **Several** recently identified
applications for SchemaSQL, however, mainly rely on its ability to treat
data and schema labels in a uniform manner, and call for an efficient
implementation of it on a single RDBMS. We first develop a logical algebra
for SchemaSQL by combining classical relational algebra with four
restructuring operators-unfold, fold, **split** , and unite-originally
introduced in the context of the tabular data model by Gyssens et al.,
(1996), and suitably adapted to fit the needs of SchemaSQL. We give an
algorithm for translating SchemaSQL queries/views involving restructuring,
into the logical algebra above. We also provide physical algebraic
operators which are useful for **query optimization** . Using the various
operators as a vehicle, we give several alternate implementation strategies
for SchemaSQL queries/views. All the proposed strategies can be
implementation non-intrusively on top of existing relational DBMS, in that
they do not require any additions to the existing set of plan operators. We
conducted a series of performance experiments based on TPC-D benchmark
data, using the IBM DB2 DBMS running on Windows NT. In addition to showing
the relative tradeoffs between various alternate strategies, our
experiments show the feasibility of implementing SchemaSQL on top of
traditional RDBMS in a non-intrusive manner. Furthermore, they also suggest
new plan operators which might profitably be added to the existing set
available to relational **query optimizers** , to further boost their
performance. (32 Refs)
   Subfile: C
   Descriptors: database theory; distributed databases; mathematical
operators; open systems; query formulation; query processing; relational
algebra; relational databases; software performance evaluation; SQL
   Identifiers: SchemaSQL; SQL; multi-database interoperability; RDBMS;
logical algebra; relational algebra; restructuring operators; unfold
operator; fold operator; **split** operator; unite operator; algebraic
operators; **query optimization** ; query strategies; relational DBMS;
performance experiments; TPC-D benchmark; IBM DB2 DBMS; Windows NT; plan
operators
   Class Codes: C6160B (Distributed databases); C6160D (Relational databases
); C4250 (Database theory); C7250R (Information retrieval techniques)

6546192   INSPEC Abstract Number: C2000-05-6160S-015
   Title: Indexing large metric spaces for similarity search queries
   Author(s): Bozkaya, T.; Ozsoyoglu, M.
   Author Affiliation: Oracle Corp., Redwood Shores, CA, USA
   Journal: ACM Transactions on Database Systems   vol.24, no.3   p.
361-404
   Publisher: ACM,
   Publication Date: Sept. 1999 Country of Publication: USA
   CODEN: ATDSD3 ISSN: 0362-5915
   SICI: 0362-5915(199909)24:3L.361:ILMS;1-F
   Material Identity Number: A316-2000-002
   U.S. Copyright Clearance Center Code: 0362-5915/99/0900-0361$5.00
   Language: English   Document Type: Journal Paper (JP)

Treatment: Applications (A); Practical (P)

Abstract: One of the common queries in **many database** applications is finding approximate matches to a given query item from a collection of data items. For example, given an image database, one may want to retrieve all images that are similar to a given query image. Distance-based index structures are proposed for applications where the distance computations between objects of the data domain are expensive (such as high-dimensional data) and the distance function is metric. In this paper we consider using distance-based index structures for similarity queries on large metric spaces. We elaborate on the approach that uses reference points (vantage points) to **partition** the data space into spherical shell-like regions in a hierarchical manner. We introduce the multivantage point tree structure (mvp-tree) that uses more than one vantage point to **partition** the space into spherical cuts at each level. In answering similarity-based queries, the mvp-tree also utilizes the precomputed (at construction time) distances between the data points and the vantage points. We summarize the experiments comparing mvp-trees to vp-trees that have a similar **partitioning** strategy, but use only one vantage point, at each level and do not make use of the precomputed distances. Empirical studies show that the mvp-tree outperforms the vp-tree by 20% to 80% for varying query ranges and different distance distributions. Next, we generalize the idea of using multiple vantage points and discuss the results of experiments we have made to see how varying the number of vantage points in a node affects search performance and how much is gained in performance by making use of precomputed distances. The results show that, after all, it may be best to use a large number of vantage points in an internal node in order to end up with a single directory node and keep as many of the precomputed distances as possible to provide more **efficient** filtering during **search** operations. Finally, we provide some experimental results that compare mvp-trees with M-trees, which is a dynamic distance-based index structure for metric domains. (24 Refs)

Subfile: C

Descriptors: database indexing; tree data structures; visual databases

Identifiers: large metric spaces indexing; similarity search queries; database; image database; high-dimensional dat; spherical shell-like regions; multivantage point tree structure; similarity-based queries; M-trees

Class Codes: C6160S (Spatial and pictorial databases); C6120 (File organisation)

6352687 INSPEC Abstract Number: C1999-10-6120-020
Title: **New access index for fast execution of conjunctive queries over text data**

Author(s): Yuping Yang; Singhal, M.
Author Affiliation: Dept. of Comput. & Inf. Sci., Ohio State Univ., Columbus, OH, USA

Conference Title: Proceedings. IDEAS'99. International Database Engineering and Applications Symposium (Cat. No.PR00265) p.248-53
Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
Publication Date: 1999 Country of Publication: USA xiii+467 pp.
ISBN: 0 7695 0265 2 Material Identity Number: XX-1999-02254
U.S. Copyright Clearance Center Code: 0 7695 0265 2/99/$10.00
Conference Title: IDEAS '99. International Database Engineering and Applications Symposium
Conference Sponsor: Condordia Univ.; Faculty of Eng. & Comput. Sci.; Dept. Comput. Sci.; IEEE Comput. Soc
Conference Date: 2-4 Aug. 1999 Conference Location: Montreal, Que., Canada
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P); Theoretical (T)
Abstract: Complex queries with multiple conjunctive (AND) **predicates**

have attracted increasing attention for their **importance** in OLAP systems. The signature index is ideal for the fast execution of queries involving multiple conjunctive predicates. However, previous signature-based methods did not separate the signatures from different attributes. We have developed a signature-augmented access index, called an MG-tree. Its main features are: (1) it is a lightweight search tree for indexing multiple attributes of text data, and (2) it eliminates the mix of signatures from different attributes, so the construction and maintenance of the index is easy and **searching** is **efficient** . Our analyses and experiments show that the MG-tree achieved a significant improvement in terms of access speed and storage space overhead over both tree-like indexes and previous multi-dimensional signature indexes, and is easier to build and maintain. The MG-tree can be employed in practical DBMS implementations. (12 Refs)

Subfile: C

Descriptors: Boolean functions; data mining; database indexing; full-text databases; query processing; tree data structures

Identifiers: signature-augmented access index; fast query execution; conjunctive queries; text data; complex queries; multiple conjunctive predicates; AND predicates; OLAP systems; MG-tree; lightweight search tree; multiple attribute indexing; index construction; index maintenance; search efficiency; access speed; storage space overhead; tree-like indexes; multi-dimensional signature indexes; DBMS implementations

Class Codes: C6120 (File organisation); C6160Z (Other DBMS); C4250 (Database theory)

21/5/26   (Item 5 from file: 2)

5789549   INSPEC Abstract Number: C9802-6160B-008
   Title: **A hyperrelational approach to integration and manipulation of data in multidatabase systems**
   Author(s): Chiang Lee; Ming-Chuan Wu
   Author Affiliation: Inst. of Inf. Eng., Nat. Cheng Kung Univ., Tainan, Taiwan
   Abstract: The issue of interoperability among **multiple** autonomous **databases** has attracted a lot of attention from researchers. The past research on this issue can be roughly **divided** into two main categories: the tightly-integrated approach that integrates databases by building an integrated schema; and the loosely-integrated approach that achieves interoperability by using a multidatabase language. Past efforts focus on the issues in the first approach. The problem with the first approach is that it lacks a convenient representation of the integrated schema at the system level and a sound mathematical basis for data manipulation in a multidatabase system. We propose to use hyperrelations as a powerful and succinct model for the global level representation of heterogeneous database schemas. A hyperrelation has the structure of a relation, but its contents are the schemas of the semantically equivalent local relations in the databases. With this representation, the metadata of the global database, local databases and the data of these databases are all representable by using the structure of a relation. The impact of such a representation is that all the elegant features of relational systems can be easily extended to multidatabase systems. A hyperrelational algebra is designed accordingly. This algebra is performed at the multidatabase systems (MDBS) level such that **query** transformation and **optimization** is

supported on a sound mathematical basis. (52 Refs)
   Subfile: C
   Descriptors: data handling; database theory; distributed databases; open
systems; query processing; relational algebra; relational databases
   Identifiers: hyperrelational approach; data integration; data
manipulation; multidatabase systems; interoperability; **multiple**
autonomous **databases** ; tightly-integrated approach; loosely-integrated
approach; multidatabase language; heterogeneous database; global database;
local database; hyperrelational algebra; query transformation; **query
optimization**
   Class Codes: C6160B (Distributed databases); C4250 (Database theory);
C6160D (Relational databases); C4210 (Formal logic)
   Copyright 1998, IEE

   21/5/27   (Item 6 from file: 2)
   Title:. **Image decomposition and representation in large image database
systems**
   Author(s): Guo, J.; Zhang, A.; Remias, E.; Sheikholeslami, G.
   Author Affiliation: Dept. of Comput. Sci., State Univ. of New York,
Buffalo, NY, USA
   Abstract: To an increasing extent, applications demand the capability of
retrieval based on image content. As a result, large image database systems
need to be built to support effective and efficient accesses to image data
on the basis of content. In this process, significant features must first
be extracted from image data in their pixel format. These features must
then be. classified and indexed to .assist efficient retrieval of image
content. However, the issues central to automatic extraction and indexing
of image content largely remain an open problem. Tools are not currently
available with which to accurately specify image content for image database
uses.   In this paper, we investigate effective block-oriented image
decomposition structures to be used as the representation of images in
image database systems. Three types of block-oriented image decomposition
structures, namely, quad-, quin- and nona-trees, are compared. In analyzing
and comparing these structures, wavelet transforms are used to extract
image content features. Our experimental analysis illustrates that
nona-tree decomposition is the most effective of the three decomposition
structures available to facilitate effective content-based image retrieval.
Using the nona-tree structure to represent image content in an image
 database   , various types of content-based **queries** and **efficient**
image retrieval can be supported through novel indexing and searching
approaches. We demonstrate that the nona-tree structure provides a highly
effective approach to supporting automatic organization of images in large
image database systems. (28 Refs)
   Subfile: C
   Descriptors: feature extraction; image classification; image
representation; image **segmentation** ; indexing; .query processing; spatial
data structures; tree data structures; very large databases; visual
databases; wavelet transforms
   Identifiers: quad-trees; image representation; large image database
systems; content-based queries; image data access; feature extraction;
pixel format; feature classification; image feature indexing;
block-oriented image decomposition structures; quin-trees; nona-trees;

wavelet transforms; content-based image retrieval; searching; automatic image organization
Class Codes: C6160S (Spatial and pictorial databases); C5260B (Computer vision and image processing techniques); C1130 (Integral transforms); C6120 (File organisation)

21/5/28   (Item 7 from file: 2)

5430876   INSPEC Abstract Number: C9701-6160B-018
 Title: **Query processing in Distributed PIOS**
  Author(s): Rabitti, F.; Benedetti, L.; Demi, F.
  Author Affiliation: Istituto CNUCE, CNR, Pisa, Italy
  Conference Title: Proceedings. Seventh International Workshop on Database and Expert Systems Applications   p.470-5
  Editor(s): Wagner, R.R.; Thoma, H.
  Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
  Publication Date: 1996 Country of Publication: USA   xiii+521 pp.
  ISBN: 0 8186 7662 0   Material Identity Number: XX96-02444
  U.S. Copyright Clearance Center Code: 0 8186 7662 0/96/$05.00
  Conference Title: Proceedings of 7th International Conference and Workshop on Database and Expert Systems Applications: DEXA 96
  Conference Date: 9-10 Sept. 1996   Conference Location: Zurich, Switzerland
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Practical (P)
  Abstract: An approach to query processing in object oriented distributed database systems is proposed. Distributed PIOS is a server that supports an object-oriented data model, physical data independence (i.e. different strategies for storing class hierarchies, grouping, horizontal and vertical **partitioning** of objects), and fragmentation transparency (i.e. transactions are not aware of the distribution of **database** fragments on **several** nodes of a computer network). The problem of the **optimization** of distributed **queries** (i.e. determining which data must be accessed at which site and which data must be transmitted among sites) is the focus of the paper. (5 Refs)
  Subfile: C
  Descriptors: data structures; distributed databases; file servers; object-oriented databases; query processing
  Identifiers: query processing; object oriented distributed database systems; Distributed PIOS; server; object-oriented data model; physical data independence; fragmentation transparency; distributed **query optimization**
  Class Codes: C6160B (Distributed databases); C6160J (Object-oriented databases); C6120 (File organisation)

21/5/29   (Item 8 from file: 2)

5050855   INSPEC Abstract Number: C9510-6160B-018
 Title: **Load balancing in distributed query processing**
  Author(s): Chengwen Liu; I-Ping Chu
  Author Affiliation: Comput. Sci., DePaul Univ., Chicago, IL, USA
  Conference Title: Database Systems for Advanced Applications '95. Proceedings of the Fourth International Conference on Database Systems for Advanced Applications   p.256-63
  Editor(s): Ling, T.W.; Masunaga, Y.
  Publisher: World Scientific, Singapore
  Publication Date: 1995 Country of Publication: Singapore   xv+468 pp.
  ISBN: 981 02 2220 3
  Conference Title: Proceedings of 4th International Symposium on Database

Systems for Advanced Applications
  Conference Date: 10-13 April 1995   Conference Location: Singapore
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Practical (P); Theoretical (T)

  Abstract: Query processing is a very important issue in distributed
databases . **Many** algorithms have been proposed to process distributed
queries **efficiently** . However, most of the algorithms use oversimplified
cost models and ignore the impact of work load generated by other
applications. As a result, load balancing is difficult to achieve in a real
environment. We provide an adaptive scheme to do load balancing
effectively. The scheme takes into account an environment in which the load
at different sites varies. The **partition** and replicate strategy algorithm
is used to explain how to achieve load balancing in a multi-user
environment. The scheme also has learning capability such that the
parameters of cost estimation functions can be adaptively adjusted as the
environment changes. (20 Refs)
  Subfile: C
  Descriptors: database theory; distributed databases; query processing;
resource allocation; software cost estimation
  Identifiers: load balancing; distributed query processing; distributed
databases; oversimplified cost models; work load; adaptive scheme;
partition and replicate strategy algorithm; multi-user environment;
learning capability; cost estimation functions
  Class Codes: C6160B (Distributed databases); C4250 (Database theory);
C6150J (Operating systems)

21/5/30   (Item 9 from file: 2)

4990096   INSPEC Abstract Number: C9508-7250-008
  Title: **Efficient signature file methods for text retrieval**
  Author(s): Dik Lun Lee; Young Man Kim; Gaurav Patel
  Author Affiliation: Dept. of Comput. & Inf. Sci., Ohio State Univ.,
Columbus, OH, USA
  Language: English   Document Type: Journal Paper (JP)
  Treatment: Practical (P)
  Abstract: Signature files have been studied extensively, as an access
method for textual **databases** . **Many** approaches have been proposed for
searching signatures files **efficiently** . However, different methods make
different assumptions and use different performance measures, making it
difficult to compare their performance. In this paper, we study three basic
methods proposed in the literature, namely, the indexed descriptor file,
the two-level superimposed coding scheme, and the **partitioned** signature
file approach. The contribution of this paper is two-fold. First, we
present a uniform analytical performance model so that the methods can be
compared fairly and consistently. The analysis shows that the two-level
superimposed coding scheme, if stored in a transposed file, has the best
performance. Second, we extend the two-level superimposed coding method
into a multilevel superimposed coding method, we obtain the optimal number
of levels for the multilevel method and show that for databases with
reasonable size the optimal value is much larger than 2, which is assumed
in the two-level method. The accuracy of the analytical formula is
demonstrated by simulation. (21 Refs)
  Subfile: C
  Descriptors: information retrieval
  Identifiers: signature file methods; text retrieval; access method;
textual databases; performance measures; indexed descriptor file; two-level
superimposed coding scheme; **partitioned** signature file approach;
simulation

21/5/31   (Item 10 from file: 2)
DIALOG(R)File   2:INSPEC
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4846580   INSPEC Abstract Number: C9502-6160K-004
   Title: **Specifying rule-based** query optimizers **in a reflective framework**
   Author(s): Fegaras, L.; Maier, D.; Sheard, T.
   Author Affiliation: Dept. of Comput. Sci. & Eng., Oregon Graduate Center, Beaverton, OR, USA
   p.146-68
   Editor(s): Ceri, S.; Tanka, K.; Tsur, S.
   Publisher: Springer-Verlag, Berlin, Germany
   Publication Date: 1993 Country of Publication: West Germany   xl+488 pp.
   ISBN: 3 540 57530 8
   Conference Title: Third International Conference, DOOD '93. Deductive and Object-Oriented Databases
   Conference Date: 6-8 Dec. 1993   Conference Location: Phoenix, AZ, USA
   Language: English   Document Type: Conference Paper (PA)
   Treatment: Practical (P)

   Abstract: **Numerous** structures for **database query optimizers** have been proposed. Many of those proposals aimed at automating the construction of **query optimizers** from some kind of specification of optimizer behavior. These specification frameworks do a good job of **partitioning** and modularizing the kinds of information needed to generate a **query optimizer** . Most of them represent at least part of this information in a rule-like form. Nevertheless, large portions of these specifications still take a procedural form. The contributions of this work are threefold. We present a language for specifying optimizers that captures a larger portion of the necessary information in a declarative manner. This language is in turn based on a model of query rewriting where query expressions carry annotations that are propagated during query transformation and planning. This framework is reminiscent of inherited and synthesized attributes for attribute grammars, and we believe it is expressive of a wide range of information: logical and physical properties, both desired and delivered, cost estimates, optimization contexts, and control strategies. Finally, we present a mechanism for processing optimizer specifications that is based on compile-time reflection. This mechanism proves to be succinct and flexible, allowing modifications of the specification syntax, incorporation of new capabilities into generated optimizers, and retargeting the translation to a variety of optimization frameworks. We report on an implementation of our ideas using the CRML reflective functional language and on optimizer specifications we have written for several query algebras. (13 Refs)
   Subfile: C
   Descriptors: attribute grammars; deductive databases; formal specification; query languages; query processing; rewriting systems
   Identifiers: rule-based **query optimizer** specification; reflective framework; database **query optimizers** ; modularisation; **partitioning** ; rule-like form; procedural form; language; query rewriting; query expressions; query transformation; query planning; synthesized attributes; inherited attributes; attribute grammars; logical properties; physical properties; cost estimates; optimization contexts; control strategies; compile-time reflection; specification syntax
   Class Codes: C6160K (Deductive databases); C6110F (Formal methods); C6140D (High level languages); C4210L (Formal languages and computational linguistics); C4250 (Database theory)

21/5/32   (Item 11 from file: 2)
DIALOG(R)File   2:INSPEC

4635501   INSPEC Abstract Number: B9405-6250F-057, C9405-7410F-022
 Title: Performance modeling and simulation of data management for personal communications applications
  Author(s): Lo, C.N.; Mohan, S.; Wolff, R.S.
  Author Affiliation: Bellcore, Morristown, NJ, USA
  p.210-14
  Publisher: IEEE, New York, NY, USA
  Publication Date: 1992 Country of Publication: USA   xxi+692 pp.
  ISBN: 0 7803 0841 7
  U.S. Copyright Clearance Center Code: 0 7803 0841 7/92/$3.00
  Conference Title: Proceedings of 2nd International Symposium on Personal, Indoor and Mobile Radio Communications
  Conference Sponsor: IEEE; Worcester Polytech. Inst.; IEE; IEICE Japan; GTE Lab
  Conference Date: 19-21 Oct. 1992   Conference Location: Boston, MA, USA
  Language: English   Document Type: Conference Paper (PA)
  Treatment: Practical (P); Theoretical (T)

  Abstract: The paper analyses and simulates the impact of providing voice and non-voice personal communications services (PCS) on the volume of network database transactions. A number of activities in PCS, such as user mobility and call origination and delivery, require data management functions. These include mobility registration, radio channel management, service profile **query** , security-related **functions** such as authentication and privacy, and special billing arrangements. A large portion of these data management activities may be performed using elements of the intelligent network such as switches (e.g., service switching point or SSP) and network databases (e.g.; service control point or SCP). The authors extend the single logical database model to include data **partitioning** into **multiple databases** . This model is helpful in case a single database is inadequate to handle all the transaction volume generated due to PCS. They give a first-cut analysis using such a model. A simulation framework is described for data management under various scenarios. This work pertains mainly to data management. In addition, qualitative effects of data **partitioning** on signaling traffic are outlined. (6 Refs)
  Subfile: B C
  Descriptors: digital simulation; personal communication networks; telecommunication network management; telecommunication signalling; telecommunication traffic; telecommunications computing
  Identifiers: simulation; performance modeling; personal communications services; PCS; network database transactions; user mobility; call origination; call delivery; mobility registration; radio channel management ; service profile query; security; authentication; privacy; billing; intelligent network; service switching point; SSP; switches; service control point; SCP; logical database model
  Class Codes: B6250F (Mobile radio systems); B6210D (Telephony); B6210C (Network management); C7410F (Communications)

 21/5/33   (Item 1 from file: 99)
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs

2045959 H.W. WILSON RECORD NUMBER: BAST00017393
A genetic algorithm for vertical fragmentation and access path selection
Song, Suk-Kyu; Gorla, Narasimhaiah
The Computer Journal v. 43 no1 (2000) p. 81-93
DOCUMENT TYPE: Feature Article ISSN: 0010-4620 LANGUAGE: English
RECORD STATUS: Corrected or revised record

ABSTRACT: Vertical fragmentation and access path selection are interdependent techniques in physical database design used to enhance performance in database systems. While vertical fragmentation in relational databases deals with assignment of attributes to physical files, access path selection deals with **searching efficiently** the physical

location of data records. Vertical fragmentation is a combinatorial
optimization problem that is NP-hard in most cases. We propose a genetic
algorithm approach for the vertical fragmentation problem while addressing
access path selection. The effectiveness and efficiency of the genetic
algorithm are illustrated through **several database** design problems,
ranging from 10 attributes/5 transactions to 30 attributes/18 transactions.
In most cases, our design solutions match the global optimum solutions
obtained from an exhaustive enumeration. Compared to unpartitioned
databases, our design solution results in substantial savings (up to 80%)
in the number of disk accesses. Reprinted by permission of the publisher.

DESCRIPTORS: Data **partitioning** ; Database design; Genetic algorithms;

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Set     Items     Description
S1    1941920    QUER? OR SEARCH? OR REQUEST?
S2      40877    (PLURAL? OR VARIOUS OR SEVERAL OR MULTIPL? OR MANY OR NUME-
                 ROUS OR UNLIMITED)(2N)(DATA()BASE? OR DATABASE?)
S3      19475    PREDICATE?
S4          7    S3 (2N)(DICTIONAR? OR GLOSSAR? OR LEXICON? OR VOCABULAR? OR
                 WORDBOOK?)
S5        182    (STRENGTH OR WEIGHT OR SIGNIFICANCE OR INFLUENCE OR IMPORT-
                 ANCE)(10N) S3
S6    1372165    DATABASE? OR DATA()BASE?
S7    3357609    PARTITION? OR PARSE OR PARSING OR SPLIT? OR DIVIDE? OR SEC-
                 TION? OR SEGMENT? OR SEPARATE? (5N) S1
S8      32211    (OPTIMIZ? OR PERFECT? OR FUNCTION? OR EFFECTIVE? OR EFFICI-
                 ENT?)(2N)S1
S9          0    S4 (S) S5
S10      1395    S7 (S) S2
S11        15    S10 (S) S8
S12         0    S10 (S) S4
S13         0    S10 (S) S5
S14         0    S2 (S) S4
S15         0    S2 (S) S5
S16         0    S8 (S) S5
S17         0    S8 (S) S4
S18         0    S4 AND S5
S19      9791    S7 AND S2
S20       912    S19 AND S8
S21         0    S19 AND S4
S22         2    S19 AND S5
S23        83    S7 AND S5
S24         9    S7 (S) S5
S25         0    S7 (S) S4
S26         4    S7 AND S4
S27        30    S11 OR S22 OR S24 OR S26
S28        29    S27 NOT PY>2001
S29        27    S28 NOT PD>20010228
S30        27    RD (unique items)
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File 553:Wilson Bus. Abs. FullText 1982-2003/Oct
          (c) 2003 The HW Wilson Co
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01140118 97-89512
                    USE FORMAT 9 FOR FULL TEXT
Natural language processing for information retrieval
Lewis, David D; Jones, Karen Sparck
Communications of the ACM v39n1 PP: 92-101 Jan 1996 ISSN: 0001-0782
JRNL CODE: ACM
DOC TYPE: Journal article LANGUAGE: English   LENGTH: 10 Pages
SPECIAL FEATURE: References
WORD COUNT: 6728

ABSTRACT: The need for automatic text retrieval (TR), also known as
document retrieval (DR) has caught the attention of researchers in natural
language processing (NLP). An examination is made of DR's key properties.
Past experience in the field is summarized, and various specific NLP
research strategies targeting this form of information processing are
reviewed. Although conventional DR services continue to make heavy use of
strongly controlled indexing languages, indexing increasingly involves
terms drawn from the natural language of documents. These simple
natural-language indexing techniques have been shown adequate in many
experiments, though not on a really large scale. These techniques are also
beginning to be used for TR. However, the greater information detail in
full text apparently calls for more sophisticated NLP-based approaches to
indexing and retrieval. It is suggested that appropriate strategies for
this new situation should follow the simple DR methods, extending them to
handle compound terms and similar descriptive units.

DESCRIPTORS: Information retrieval; Technological change; Systems
    development; Language; Information processing; Trends
CLASSIFICATION CODES: 5240 (CN=Software & systems)

...TEXT: various services. The long-running debate on controlled vs.
natural language indexing has become less important as **many** commercial
 databases now use both. Most searches in these databases are done for end
users by professional intermediaries who... context. In any case,
grammatical and statistical methods are increasingly combined.

The proposal described in the following **sections** develops these themes
and investigates the role NLP may now play in full-text searching. The
proposal... and does, for instance, exploit a store of paradigmatic
knowledge. It may be difficult to convey the **significance** of statistical
data; and while artificial description forms, like **predicate** -argument
structures, can be applied in TR in a way that is hidden, so users are not
... vocabulary problem in human-system communication. Commun. ACM, 30, 11
(1987), 964-971.

9. Hahn, U. Topic **parsing** : Accounting for text macro structures in
full-text analysis. Inf. Process. Manage., 26, 1 (1990), 135-170...

01103287 97-52681
                    USE FORMAT 9 FOR FULL TEXT
DX: A deontic expert system
Lee, Ronald M; Ryu, Young U
Journal of Management Information Systems: JMIS v12n1 PP: 145-169 Summer
1995 ISSN: 0742-1222 JRNL CODE: JMI
DOC TYPE: Journal article LANGUAGE: English   LENGTH: 25 Pages
SPECIAL FEATURE: Charts Equations References
WORD COUNT: 8392

ABSTRACT: Social norms have a pervasive effect on people's lives, affecting their dress, travel, recreation, work, and participation in the society at large. Other social norms make constraints on the behavior of commercial companies and other institutions, affecting the way they do business, their treatment of employees, and their treatment of the environment. As societies grow and become more diverse, the system of norms becomes correspondingly complex. An attempt is made to bring computational assistance to bear in managing and interacting with these normative systems. A prototype expert system is described that utilizes deontic rules for reasoning about normative constraints in organizations and other social systems. Applications to bureaucracies and electronic contracting systems are discussed. DX can be used to model regulations and policies in organizations, such as library regulations of universities, and resource access policies. Also, regulatory aspects in interorganizational systems can be effectively modeled and managed by DX.

DESCRIPTORS: Expert systems; Systems development; Models; Social life & customs; Cognition & reasoning; Ethics; Applications
CLASSIFICATION CODES: 5240 (CN=Software & systems); 2410 (CN=Social responsibilities); 1200 (CN=Social policy); 9130 (CN=Experimental/Theoretical)

...TEXT: will present a prototype deontic expert system, called DX, and demonstrate its operation and applicability. In later **sections** we discuss extensions to this basic model and its potential application to large-scale normative systems.

2... choices of state transformations are done via the backtracking techniques [3, 24].

The computing process in this **section** is obtained by program clause logic programming of selected deontic logic axioms and theorems. It can be...is either a constant, variable, or a function. These terms are regarded as part of the open **vocabulary** as **predicates** for conditions are. The combined syntax for the DX rules is shown in figure 1.

Note that...

... components, interpreter and dialog, and provides data structures for rules and facts as defined in the previous **section** . The interpreter consists of a knowledge control strategy, which is based on the resolution of deontic logic... to determine the deontic status of a specific action, following the computing process for deontic reasoning in **section** 2.2. When an Assess command of an action, say X:DO-SOMETHING, is given, DX tries ...2 theta sub 2)>.

Further transformations of the state and refutations of PERMIT(--) by deontic reasoning in **section** 2.2 may result in a state:

sigma = < (), (alpha sub 1 Theta sub 1 , alpha sub 2...accessible DX commands, through which the users query and update conditions.

* DX provides deontic deduction capabilities.
In **sections** 2 and 3, we focused our attention on the syntactic aspect of DX, which includes the procedural...

... completeness of DX reasoning require further investigations; we will leave these as a future research issue.

In **section** 5, we proposed two directions for extensions to DX: defeasible reasoning and temporal reasoning extensions. Another research...

01094347 97-43741

USE FORMAT 9 FOR FULL TEXT

The ONLINE 100: ONLINE Magazine's Field Guide to the 100 Most Important Online Databases
Gehrig, Virginia Gatcheff
Information Today v12n8 PP: 19, 22 Sep 1995 ISSN: 8755-6286
JRNL CODE: IFT
DOC TYPE: Journal article LANGUAGE: English LENGTH: 2 Pages
WORD COUNT: 531

ABSTRACT: The book The ONLINE 100: ONLINE Magazine's Field Guide to the 100 Most Important Online Databases by Mick O'Leary is reviewed.

GEOGRAPHIC NAMES: US

DESCRIPTORS: Online data bases; Ratings & rankings; Book reviews
CLASSIFICATION CODES: 9190 (CN=United States); 8302 (CN=Software and
    computer services); 5200 (CN=Communications & information management)

...TEXT: much less painful with his collection of the best 100 databases. The book is a directory of **various** types of **databases** available in the online world. Each database profile contains a brief description of the database, a "Content Notes" **section** , which summarizes the content of the database, a "Search Notes" **section** , which gives tips on **effective searching** , a **section** called "Do Not Use For," which notes the limitations of the database, and the "Key Facts" **section** , which lists the time span of the database, the producer, which systems carry it, where to find...

   30/5,K/8   (Item 8 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

01059068 97-08462

USE FORMAT 9 FOR FULL TEXT

DataTimes' big move
O Leary, Mick
Information Today v12n6 PP: 16-17+ Jun 1995 ISSN: 8755-6286
JRNL CODE: IFT
DOC TYPE: Journal article LANGUAGE: English LENGTH: 3 Pages
WORD COUNT: 1873

ABSTRACT: The first generation online services, including pioneers like DIALOG, NEXIS, Dow Jones News/Retrieval, and DataTimes are scrambling to catch up with the 2nd generation, user friendly online services. No other service has tried to come further faster than DataTimes. With its new EyeQ service, DataTimes has taken a chance on a vastly ambitious and expensive makeover. The company has rebuilt from the ground up - new data, alliances, software, interface, and pricing. This bootstrap effort is generally successful and redefines DataTimes as a 2nd-generation online service. DataTimes has quickly assembled a comprehensive set of business information sources , but there are a half-dozen online services with comparable information. The EyeQ software is effective and attractive, but these features are taken for granted by today's computer-savvy information user. DataTime's output-based costs put them at the forefront of pricing trends, but others are catching up. DataTimes will have to market and promote against names like Dow Jones and NEXIS, which are far better known. Thus much hard work remains for DataTimes.

COMPANY NAMES:
DataTimes
GEOGRAPHIC NAMES: US

DESCRIPTORS: Online information services; Service introduction; Online data

bases; Computer upgrading; Software reviews
CLASSIFICATION CODES: 9190 (CN=United States); 8302 (CN=Software and
    computer services); 5250 (CN=Telecommunications systems); 9120
    (CN=Product specific)

...TEXT: diverse set of databases. The screens are bright, attractive, and
uncluttered. In both novice and command modes, **search** steps are
efficiently and logically presented. Documentation in the Windows Help
section is clear and thorough. EyeQ's major weakness is in the
arrangement of **databases** . **Several** preformatted groupings are provided,
but it is not easy to tell what sources are in what category...

30/5,K/9   (Item 9 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2003 ProQuest Info&Learning. All rts. reserv.

01045495 96-94888
                    USE FORMAT 9 FOR FULL TEXT
SilverPlatter CD-ROM discs
Ashworth, Wilfred
New Library World v96n1121 PP: 37 1995 ISSN: 0307-4803 JRNL CODE: NLW
DOC TYPE: Journal article LANGUAGE: English   LENGTH: 1 Pages
WORD COUNT: 658

ABSTRACT: The SilverPlatter Directory of CD-ROM Discs is almost a 1/4 of an
inch thick and runs to 92 pages listing more than 200 databases. Many of
these databases are available from other suppliers but differ in the layout
and in the search software which accompanies them. SilverPlatter's search
method has been designed to work with all their discs – a distinct
advantage because it has to be learned only once and the owner of several
databases does not have to install special software for each which would
take up valuable space on a hard disk. Currently the search software comes
on a separate CD-ROM which will install either SPIRS for DOS or WINSPIRS.
It also carries a substantial demonstration database of medical references
on AIDS, the software to load MACSPIRS for the Macintosh, and an electronic
copy of the full SilverPlatter Directory. Other SilverPlatter databases are
also discussed.
COMPANY NAMES:
SilverPlatter Information Inc
GEOGRAPHIC NAMES: UK

DESCRIPTORS: Data bases; CD-ROM; Applications; Software reviews;
    Directories
CLASSIFICATION CODES: 5240 (CN=Software & systems); 9120 (CN=Product
    specific); 9175 (CN=Western Europe)

...TEXT: is almost a quarter of an inch thick and runs to 92 pages listing
more than 200 **databases** . **Many** of these **databases** are available from
other suppliers but differ in the layout and in the search software which
accompanies...

...their discs--a distinct advantage because it has to be learned only once
and the owner of **several databases** does not have to install special
software for each which would take up valuable space on hard disk.
Currently the **search** software comes on a **separate** CD-ROM which will
install either SPIRS for DOS, or WINSPIRS (the Windows version). It also
carries...

... edition of a textual database is one which can be confidently
recommended for ease of use and **effective searching** .

Nursing and Allied Health (CINAHL) is a comprehensive database of citations
to nursing and health literature, 1983...

30/5,K/10   (Item 10 from file: 15)

00905786 95-55178
                    USE FORMAT 9 FOR FULL TEXT
Cost engineering: Making it work
Hadnett, Arthur J
American Association of Cost Engineers Transactions 1994 Transactions
PP: CSC1.1-CSC1.6 1994 CODEN: AACTAZ ISSN: 0065-7158 JRNL CODE: AEE
DOC TYPE: Journal article LANGUAGE: English   LENGTH: 6 Pages
SPECIAL FEATURE: Charts Graphs References
WORD COUNT: 4117

ABSTRACT: The total cost management (TCM) concept is exciting if not new.
Prevention of unwarranted expenditures of time and dollars has been central
to the total quality concept. In the US, total quality management is slowly
finding its way into the mainstream. Cost engineering is still struggling
to achieve recognition. There are things that members of the cost
engineering profession can do to hasten the acceptance of management
control into industry. First, cost engineers need to recognize some of the
deficiencies that developed over time and resolve them. Next, they must
recognize that users of cost engineering tools encompass the entire project
organization and that each can use the service of cost engineers. Cost
engineers must be responsible for presenting the facts quickly, succinctly,
and accurately.   They cannot assume that everyone understands the concepts
they use on a routine basis. It is the responsibility of the cost engineer
to make the organization aware of TCM through a representative training
program.

GEOGRAPHIC NAMES: US

DESCRIPTORS: Cost engineering; Total quality; Project management;
   Professional development; Recommendations
CLASSIFICATION CODES: 9190 (CN=United States); 3100 (CN=Capital & debt
   management); 5320 (CN=Quality control); 6200 (CN=Training & development)

...TEXT: of infrastructure projects, and downscoping of future work is
headline fodder for the front page and business **sections** of local
newspapers. The concept of Total Cost Management (TCM) is a cry in the dark
when...

... are written by an MIS department or outsourced through a reputable
programmer. Think for a moment how **many** spreadsheets, **databases** ,
graphics packages, and even program management packages have been developed
by frustrated cost engineers or adventurous MIS...can adjust your grouping
of the audience accordingly. The executive information system model,
discussed in the next **section** , will help you to further analyze your
audience and to develop the type of analysis they need...will get immediate
attention and recognition from the reader. The following war story should
help focus the **importance** of this point.

As a cost engineer, I have **predicated** my work on its being destined to
drive project management to remain on course or take corrective...this for
thirty years" and don't need a schedule to manage the job.

To summarize this **section** , all of the good analysis in the world isn't
going to save your firm a penny...

...topics and technical engineering topics. One meeting might be devoted to
cost forecasting and the next on **segmental** bridge construction. Both
groups learn from each other and both tend to work more closely. The
training...

... work may well be the most important since it opens the eyes of the team
to a **segment** of a project that gets little vocational attention and,
therefore, is viewed with caution, if not disdain...

00655519 93-04740
                  USE FORMAT 9 FOR FULL TEXT
Holding the Reins on Distributed Databases
Wolfson, Ken
Chief   Information   Officer   Journal v5n2   PP: 48-51   Fall   1992   ISSN:
    0899-0182   JRNL CODE: CJL
DOC TYPE: Journal article LANGUAGE: English   LENGTH: 4 Pages
SPECIAL FEATURE: Charts
WORD COUNT: 1664

ABSTRACT: Given   the   risks   associated   with distributed databases, chief
information   officers   first   need   to   understand important basic concepts
associated   with distributed database technology. Distributing data without
also   reengineering application software will increase rather than decrease
the   aggregate   processing   capacity   needed to support a given application
and, at the same time, increase the complexity and cost of maintaining that
application.   In   developing   a   distributed   database,   it is particularly
important   to   understand   the   interaction   between   processes   and data -
specifically, which application processes interact with which data entities
and   at   what   frequencies.   Distributing   a database does not represent an
appropriate   response   to   growing   application   workload   and   performance
demands.   Increasing   the   capacity   of   a single processing unit or adding
additional   processors   to   a symmetrical processing environment would be a
more effective and scalable solution.

GEOGRAPHIC NAMES: US

DESCRIPTORS: Distributed processing ; Data bases; Technological planning;
    Systems development; Requirements
CLASSIFICATION CODES: 5220 (CN=Data processing management); 5240
    (CN=Software & systems); 9190 (CN=United States)

...TEXT: basic concepts.

WHAT IS A DISTRIBUTED DATABASE?

Distributed   database   is a catch-all term used to describe **several** types
of **database**   processing capabilities--specifically, remote request, remote
unit of work, distributed unit of work, and distributed request. Of...

... database   processing, only the distributed unit of work and distributed
request   support   transactions   in which data are **split** across two or more
physical   databases.   This   is   what people usually think of when they hear
"distributed...

... per transaction. Some   basic definitions follow. For consistency, the
term   client   is used to describe any application **function** that **requests**
    services (e.g., create, read, update, delete) from a database.

REMOTE REQUEST. A remote request allows a...

00486100 90-11857
A Framework for Evaluating CD-ROM Retrieval Software
Nicholls, Paul; Han, Isaac; Stafford, Karen; Whitridge, Katherine
Laserdisk Professional v3n2 PP: 41-46 Mar 1990 ISSN: 0896-4149
JRNL CODE: LDP
DOC TYPE: Journal article LANGUAGE: English   LENGTH: 6 Pages

SPECIAL FEATURE: Charts Graphs Appendix References

ABSTRACT: The chances of actually retrieving the desired information from a CD-ROM depend significantly on the retrieval engine supplied with the product. The proliferation of software and the increasing availability of single **databases** under **several** different access programs make software evaluation an important component in the overall CD-ROM assessment process. When evaluating a CD-ROM database product for purchase, the buyer must evaluate 3 components: 1. the database, 2. the interface, and 3. the retrieval engine. The most important evaluation criteria are users, requirements, and constraints. Other evaluation criteria for access software can be **divided** into 5 broad categories: 1. hardware and software dependencies, 2. interface features, 3. **search** and retrieval **functions** , 4. output functions, and 5. general production features. A checklist is provided that outlines the general evaluation criteria to be considered. The evaluation process will become increasingly important as new software and new products proliferate.

DESCRIPTORS: CD-ROM; Data bases; Information retrieval; CAR; User interface ; Software packages; Functions; Evaluation
CLASSIFICATION CODES: 5200 (CN=Communications & information management)

...ABSTRACT: the retrieval engine supplied with the product. The proliferation of software and the increasing availability of single **databases** under **several** different access programs make software evaluation an important component in the overall CD-ROM assessment process. When...

... most important evaluation criteria are users, requirements, and constraints. Other evaluation criteria for access software can be **divided** into 5 broad categories: 1. hardware and software dependencies, 2. interface features, 3. **search** and retrieval **functions** , 4. output functions, and 5. general production features. A checklist is provided that outlines the general evaluation...

30/5,K/14   (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2003 CMP Media, LLC. All rts. reserv.

00598125   CMP ACCESSION NUMBER: CWK19911209S0297
Gupta Preps SQLBase NLM-Claims database performs at twice the speed of Oracle's NLM
MICHAEL DORTCH ; STANLEY GIBSON
COMMUNICATIONSWEEK, 1991, n 381, 1
PUBLICATION DATE: 911209
JOURNAL CODE: CWK   LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: News
WORD COUNT: 738
TEXT:
     Gupta Technologies Inc. is expected to announce next week imminent availability of SQLBase Server 5.0, which will be offered as a NetWare Loadable Module for Novell Inc.'s NetWare network operating system.

...   features discussed in August, which the CTA's Saks said apparently have been implemented, included support for **databases   partitioned** across **multiple** disk drives or servers, faster and more **efficient** database **queries** , and maintenance of data integrity during accesses and manipulations by multiple users.
     All versions of SQLBase Server...

30/5,K/15   (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2003 The Gale Group. All rts. reserv.

02434310   SUPPLIER NUMBER: 65140851   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Really unique?(Technology Tutorial)
Glassborow, Francis
EXE, 15, 2, 33
July, 2000
ISSN: 0268-6872   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 2002   LINE COUNT: 00156

GEOGRAPHIC CODES/NAMES: 1USA   United States
DESCRIPTORS: Programming tutorial; Software development/engineering;
 Algorithm
PRODUCT/INDUSTRY NAMES: 7372510 (Software Development Tools)
SIC CODES: 7372 Prepackaged software
NAICS CODES: 51121 Software Publishers

...   for the Dinkumware implementation of the Standard Library
explicitly states that the results are undefined if the **predicate** does
not provide an equivalence relationship. The **significance** of this is that
the owner of Dinkumware is P.J. Plauger; he drafted much of the library
section of the C++ Standard.
       There are different ways of implementing unique for equivalence
relationships. Two elements being...

 30/5,K/16   **(Item 2 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01839641   SUPPLIER NUMBER: 17486933
Winning the client-server game.(ODBC)
Malik, A. Nicklas
Windows Tech Journal, v4, n8, p28(5)
August, 1995
ISSN: 1061-3501   LANGUAGE: English   RECORD TYPE: Abstract

ABSTRACT: Developing a client/server application with Microsoft's Visual
Basic requires the developer to understand a large body of rules. Knowing
when and how to use ODBC is a particularly complex issue. Moving data
between a VB application and a server database require the use of ODBC.
Before ODBC, developers had to learn different call libraries for each
database, but ODBC uses a common set of calls to minimize the learning
curve. Using the Microsoft Jet engine provides a common way to use ODBC.
Jet includes a full SQL engine, and can **parse** SQL statements and
optimize   queries . Jet is tuned to interface with server data, and
permits both forward and backward motion without having to manage **multiple
  database** connections. Jet's Data Object layer provides a single access
method, and makes databases available to custom controls. A Data Object
manipulates the database, without the program having to.be aware of which
database is being used.
 SPECIAL FEATURES: illustration; table; chart
 COMPANY NAMES: Microsoft Corp.--Products
 DESCRIPTORS: Product Information; Product Description/Specification;
 Application Development Software
 SIC CODES: 7372 Prepackaged software
 TICKER SYMBOLS: MSFT
 TRADE NAMES: Microsoft Visual Basic (Application development software)--
 Usage
 FILE SEGMENT: CD File 275

...ABSTRACT: Jet engine provides a common way to use ODBC. Jet includes a
full SQL engine, and can **parse** SQL statements and **optimize   queries** .
Jet is tuned to interface with server data, and permits both forward and
backward motion without having to manage **multiple   database** connections.
Jet's Data Object layer provides a single access method, and makes
databases available to custom...

30/5,K/17   (Item 3 from file: 275)

01776287   SUPPLIER NUMBER: 16854952   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Complex databases can speed response via parallel hardware, software
  design.**
Gallagher, Bob
PC Week, v12, n16, p83(1)
April 24, 1995
ISSN: 0740-1604   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 1176   LINE COUNT: 00096

ABSTRACT: Databases are increasingly being developed to speed responses to
user queries via parallel processing design. The move necessitates that IS
managers familiarize themselves with the parallel hardware on which the
databases run in addition to understanding parallel database architecture.
Implementing parallel structures in both software and hardware reduces the
chance of bottlenecks; queries can be split into smaller tasks and executed
on different processors, and response time is improved by partitioning data
over a number of disks. Parallel hardware, that is those architectures that
are either tightly or loosely coupled, are possible under symmetric
multiprocessing (SMP) and massively parallel processing (MPP),
respectively. Key advantages of SMP include its suitability for shared
memory and its operating system-sharing capabilities. MPP machines scale
better than SMP machines, although SMP systems are improving in this area.
Data partitioning and query optimization can be combined to create a
parallel partitioning architecture.

 SPECIAL FEATURES: illustration; chart
 DESCRIPTORS: Database Design; Technology Information; Query Processing;
  Performance Improvement
 FILE SEGMENT: CD File 275

...   already added them to their products. The databases simply
coordinate multiple load or dump tasks running on **separate** processors.
     Optimizing   queries for quicker response is more difficult and is
probably the main area on which vendors of parallel...

30/5,K/18   (Item 4 from file: 275)

01687692   SUPPLIER NUMBER: 15516955   (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Xyvision's PDM: integrated document and workflow management. (Parlance
  Document Manager document sharing and workgroup software) (includes
  related articles on a glossary of Xyvision PDM terms, an Xyvision company
  profile and PDM system pricing) (Cover Story)**
Karsh, Arlene E.
Seybold Report on Publishing Systems, v23, n17, p3(27)
May 30, 1994
DOCUMENT TYPE: Cover Story   ISSN: 0736-7260   LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT
WORD COUNT: 23311   LINE COUNT: 01871

 SPECIAL FEATURES: illustration; photograph; chart
 COMPANY NAMES: Xyvision Inc.--Products; Wolters Kluwer U.S. Corp.--
  Publishing; Facts and Comparisons--Publishing; United Technologies Corp.
  Sikorsky Aircraft Div.--Publishing; Grolier Publishing Co.--Publishing;
  Pratt and Whitney--Publishing; Cummins Engine Company Inc.--Publishing;
  Butterworth Legal Publishers--Publishing; Boeing Helicopter Co.--
  Publishing; Bureau of National Affairs Inc.--Publishing
 DESCRIPTORS: Software Design; Electronic Publishing; Industry Analysis;
  Image Processing; Software Packages; Data Base Management Systems; Text
  Management; Work Group Computing; Marketing Strategy; Case Study; Outlook

SIC CODES: 3570 Computer and Office Equipment; 5046 Commercial
equipment, not elsewhere classified; 7372 Prepackaged software; 3577
Computer peripheral equipment, not elsewhere classified
TICKER SYMBOLS: XYVI
TRADE NAMES: Parlance Document Manager 2.0 (DBMS)--Design and
construction; UniSQL PC Client (Database access software)--Design and
construction
OPERATING PLATFORM: OSF/Motif; Microsoft Windows
FILE SEGMENT: CD File 275

...   into managing more diverse objects, including video, animation and
even sound, other viewers will also be necessary. * **Multiple   database**
access. Xyvision has gone the extra mile to accommodate user **requests** for
additional **functionality** thus far, and we would expect it to continue in
this manner. The new Windows client, undoubtedly...

...of the software. Another user-oriented refinement that we think deserves
attention is the ability to access **multiple   databases** (currently there
can be only one) using the same sql sequences and interface. Many sites
will have...

30/5,K/19   (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01651543   SUPPLIER NUMBER: 15590489
Progress in database search strategies.
Yu, Clement; Meng, Weiyi
IEEE Software, v11, n3, p11(9)
May, 1994
ISSN: 0740-7459   LANGUAGE: ENGLISH   RECORD TYPE: ABSTRACT

ABSTRACT: A database system is generally considered successful if is
capable of fast and and accurate search and retrieval of desired records.
However, such precision and speed is difficult and costly to achieve where
data is dispersed among **many** relational **databases** located throughout a
network. This is especially so if data is unstructured. For a distributed
relational database system where relations are commonly **divided** up into
fragments, there are several recommended methods. to **efficiently** act on
queries . Among them are the identification of local processing
opportunities, adoption of a fragment-and-replicate strategy, use of
partition -and-replicate technique and hashed **partitioning** . For
heterogeneous multidabases, there are several factors to consider such as
the front end, schema integration and query translation.

SPECIAL FEATURES: illustration; program; chart
DESCRIPTORS: Database Design; Distributed Database; Theoretical Research
SIC CODES: 7372 Prepackaged software
FILE SEGMENT: AI File 88

...ABSTRACT: records. However, such precision and speed is difficult and
costly to achieve where data is dispersed among **many** relational
databases located throughout a network. This is especially so if data is
unstructured. For a distributed relational database system where relations
are commonly **divided** up into fragments, there are several recommended
methods to **efficiently** act on **queries** . Among them are the
identification of local processing opportunities, adoption of a
fragment-and-replicate strategy, use of **partition** -and-replicate technique
and hashed **partitioning** . For heterogeneous multidabases, there are
several factors to consider such as the front end, schema integration and
...

30/5,K/20   (Item 6 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01388987   SUPPLIER NUMBER: 09683825   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Industry council ups standards drive in project management. (the UK's
Computing Services Industry Council attempts to establish national
standards)
Computer Weekly, n1241, p86(1)
Nov 29, 1990
ISSN: 0010-4787   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 590   LINE COUNT: 00046

ABSTRACT: The UK's Computing Services Industry Council (COSIT) is
attempting to develop a set of national standards for project management.
Information technology projects often fail to meet deadlines and budget
limits. COSIT Dir Gordon Ewan believes that mismanagement is the cause of
many of the failures. About 20 companies and government agencies are
participating in the project management research program. Each organization
appoints a liaison to the project, selects staff to participate in the
project and conduct self appraisals, and provides each staff member with a
career log itemizing standards for and developing levels of competence. The
main goals of the research are to determine what skills and attributes are
important to successful project management, create a project skills
dictionary   predicated on a software development cycle, and develop a
project management framework.

   GEOGRAPHIC CODES: ENUK
   GEOGRAPHIC NAMES: Great Britain
   DESCRIPTORS: Research and Development; Standard; Project Management
     Software; Joint Venture; United Kingdom; Computing Services Industry
     Council
   SIC CODES: 8621   Professional organizations; 8611   Business associations
   FILE SEGMENT: CD File 275

...ABSTRACT: are to determine what skills and attributes are important to
successful project management, create a project skills **dictionary**
predicated on a software development cycle, and develop a project
management framework.
...   a series of working parties to improve the standard of project
management in the UK. Research is **divided** into three main areas: the
first will define the attributes and skills needed to make a project...

   30/5,K/21   (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01308184   SUPPLIER NUMBER: 07735178   (USE FORMAT 7 OR 9 FOR FULL TEXT)
The state of play in the world of IBM's DB2 - 2. The benefits of release
2.2.
White, Peter
Computergram International, n1279, CGI10060009
Oct 6, 1989
ISSN: 0268-716X   LANGUAGE: ENGLISH   RECORD TYPE: FULLTEXT
WORD COUNT: 1258   LINE COUNT: 00092

   DESCRIPTORS: Performance Improvement; Distributed Database; DBMS;
     Software Design; Product Introduction
   SIC CODES: 7372   Prepackaged software
   TRADE NAMES: DB2 2.2 (Data base management system)--Product introduction
   OPERATING PLATFORM: OS/2; MVS
   FILE SEGMENT: CD File 275

...   are they? The answer is query speed and distributed database.Well,
as the entire world knows distributed **database** means **many** things to
many people, and most of them don't work. However on the query front, IBM
...
...query. It has done this by using multiple index access paths or
multi-index searching.Imagine a **query** that wants to explore three

separate fields, dictating a maximum or minumum value to each and slim
down the records just to those that comply. It is the sort of **query
function** that relational databases seemed to be invented for, for instance
"Find me all the employees that have...

30/5,K/22   (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
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03856507   Supplier Number: 48394257 (THIS IS THE FULLTEXT)
**Labeling: EU, FDA part ways on label harmonization-HLI may add to criteria
    patchwork (Part 1 of 2)**
Medical Device Approval Letter, pN/A
April 1, 1998
ISSN: 1060-8338
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 5355
TEXT:
The harmonization race may be running smoothly when it comes to the use of
standards, but it could be a rough road for manufacturers on the labeling
front. For one thing, the race hasn't even started. AThe EU [European
Union] and U.S. are not harmonizing on-the labeling issue. They went one
way and we're going our own. No one has put the discussion up on the
table,@ Center for Devices Director Dr. Bruce Burlington, M.D., said in a
March 26 interview. FDA is, however, looking into how the Office of Device
Evaluation's (ODE) controversial Highlights of Labeling Information (HLI)
proposal will fit into the international arena, said Dr. Daniel Spyker,
M.D., deputy director of the Division of Cardiovascular, Respiratory and
Neurological Devices. HLI, originally called AEssential Prescribing
Information,@ grew out of an initiative of the drugs and biologics centers
to provide health care practitioners with the essentials of a drug or
device. FDA issued a draft proposal in April 1997 and had a September
public meeting on the issue. After being bombarded with complaints from
industry, CDRH scaled back its proposal and will issue a new draft. As a
result, HLI could go one of two ways still. Spyker said it could be a one-
page summary of the most important labeling information or it could simply
be highlights within the labeling document itself. For example,
manufacturers could pull out sections into the left margin for greater
emphasis, he explained. There will be a section dealing with in-ternational
issues when the agency issues the next HLI guidance document, Spyker said.
The final guidance was not issued last month, as expected, and Spyker had
no idea when it would be issued. The Health Industry Manufacturers Assn.
(HIMA) has opposed HLI, partly due to major modifications in international
labeling already under way. AThere are a whole lot of labeling changes
going on in the EU right now for the CE Mark.' To have to do that plus
massive labeling changes here in the U.S. doesn't sound like a good idea to
us,@ said Dr. Marlene Tandy, M.D., director of technology and regulatory
affairs and associate general counsel at HIMA. This June, the Medical
Device Directive becomes fully transposed in all EU nations, meaning
manufacturers of certain classes of devices will need a CE mark from a
notified body in order to sell their products in Western Europe. Tandy
added that the trade association has not examined EU and U.S. labeling
requirements in depth and can not determine if there will be any major
differences that could cause serious concern for industry. However, at
repeated conferences, regulatory affairs representatives have groaned about
how Europe's hodgepodge-of national labeling requirements has created ·
hassles for American firms in getting products on the market -- some
bordering on trade barriers (See September issue, page 8).
     Technically, HLI is a guidance document that will not be enforced by
FDA, but Tandy disagreed. AIn practice, reviewers will say, 'Where's your
HLI?' FDA claims that it is a guidance, but reviewers don't use it that
way; we haven't found a solution for this,@ she argued. According to the
association's comments on the concept: AHIMA has received word that at
least one reviewer in ODE has already begun to use this draft labeling
guidance as a requirement in discussions with a device manufacturer during

PUBLISHER NAME: Washington Information Source
INDUSTRY NAMES: BUSN (Any type of business); HLTH (Healthcare - Medical
  and Health)

...   as the two predicates. In fact, the only difference mentioned in
the 510(k) was magnet field **strength** , which went from 0.5 Tesla (T) in
the **predicate** to 1.0T in the T10-NT. According to the submission, it Ais
a 1.0 Tesla...

...system is indica-ted for use as diagnostic device that produces
transverse, sagittal, coronal and oblique cross- **sectional** images of the
internal structure of the human head, body or extremities.@ The firm added
that image...was adequate and that no further information was needed.
However, Philips agreed to modify the acoustic noise **section** of the
Operators Manual to include the data FDA had wanted. In that subsection,
the firm recommended...

30/5,K/23   (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
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01155982   Supplier Number: 40973361 (THIS IS THE FULLTEXT)
THE STATE OF PLAY IN THE WORLD OF IBM's DB2 - 2 THE BENEFITS OF RELEASE 2.2
Computergram International, n1278, pN/A
Oct 8, 1989
ISSN: 0268-716X
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1193
TEXT:
At IBM UK's DB2 briefing last week, the company made it clear that there
were plenty of improvements in the DB2 release 2.2 that ships this month -
even if a big improvement in raw transaction throughput was not one of
them. So what are they? The answer is query speed and distributed
database.Well, as the entire world knows distributed **database** means **many**
 things to many people, and most of them don't work. However on the query
front, IBM seems to have come up trumps, with a 10-fold overall improvement
and a fivefold reduction in processor time needed to handle a query. It has
done this by using multiple index access paths or multi-index
searching.Imagine a **query** that wants to explore three **separate** fields,
dictating a maximum or minumum value to each and slim down the records just
to those that comply. It is the sort of **query**   **function** that relational
databases seemed to be invented for, for instance "Find me all the
employees that have been here more than 10 years, that have sales
experience and that earn less than GBP25,000 a year".
     Multiple index
     Perhaps the criteria that John Akers himself looks for when fleshing
out the IBM sales team these days. Any such query would do. What single
index searching does is exactly what the question asks, it finds the data
pages with the length of service over 10 years and asks what next. Multiple
index searching first looks at the whole question, and sets up three
separate jobs, looking for length of service, at all the records of
historical job titles and down the salary column as well. Instead of
reading in those data pages it just loads the pointers to each set of
qualifying records, then compares them. IBM is no longer allergic to the
word "pointer," when used in conjunction with relational databases, which
it was when Codd was at the helm, but it prefers to call them Row
Identifiers or RIds. By comparing them, it can reduce the RIds to the final
answer before ever looking at a data page. That cuts down a lot of
input-output as well as a lot of work. It isn't the fact that the computer
has three eyes looking down the three columns at once that speeds the
process up, because it still does it one job at a time. But using an
intelligent pre-fetch instruction (an asynchronous fetch that invokes an

input-output without tying up a processor waiting for the disk to respond) it at least has the three disk locations being addressed in parallel, even if the final processing can't be done that way. That's where the statement of direction on multiprocessors comes in - IBM should be able to speed up those equiries further once it can work one enquiry across more than one processor. IBM got the 10-fold increase by searching a 10m row table looking for two predicates connected by the "AND" operator, where the result was 9,851 rows that qualified. Another contributor to the improved performance has been the issue of query optimisation, and here IBM was handing out some clues to the future. All of its relational database products have some form of optimiser which looks at data about the files sizes, types and structure (isn't this part of what we used to call meta-data) and decides upon the most sensible way to answer the SQL query. IBM calls these data distribution statistics and the additional ones it is keeping include the 10 most frequently used multi-index searches and non-unique indexes. These can be adjusted by the database administrator at the site and invoked or not using the DB2 Runstats utility. Will all of this type of meta-data become the province of the Repository Manager? Yes, but only in the fullness of time. These improved optimisation algorithms have created a headache for IBM and others for as long as anyone can remember. Chris Date tells an anecdote about trying to design an optimiser that will work across an entire distributed database. The same anecdote, slightly updated, is still doing the rounds of IBM presentations and like all good jokes it weakens with the number of people who have told it before. IBM's current joke about this is that you can have two chunks of data, one on an MVS mainframe, another on an OS/2 machine.The MVS system has 10m rows and the PS/2 has just 100, and an SQL query needs a relational join done on the combined databases. "Well the first thing that it tried to do was download all 10m records from the remote mainframe to the OS/2 machine." Some canned laughter. Date's version was simply that "We turned the algorithm off and asked the question with the variables in three different orders. One time it took three seconds, another time it took three hours and they're still waiting for the third one to finish." You had to be there, but however you cut it, it is still the same joke, and the same problem.The solution however is to have each of the local optimisers in constant touch with each other, and make sure that all SQL queries are fully compiled first and not taken on the fly, first search term first. It is easy to establish the last part, but optimisers that talk reliably and which take account of each other's statistics are another matter, especially where the decision to feed or not to feed all the available statistics to the optimiser is made at database administrator level. Human error will definitely find a way of creeping through into a seriously complex network. Apart from these improvements in performance what can IBM deliver that's new this month?

Distributed database

Distributed database means many things to many people. To IBM it means four things, and roughly it plans to deliver two and a half of these this month. The first is to give Systems Application Architecture SQL requests remote access across a network to any database; the second, to provide transaction integrity between one local database and one other remote database, and process SQL requests on either one of them but not both; the third is to pre-compile and bind an SQL request, and have it extract data from both databases; and the fourth, to have fully distributed requests search multiple databases and deliver the answer to one database user transparently.IBM reckons that in DB2 Version 2.2 it gets you somewhere between two and three, by getting data from two databases at once, but at the cost of guaranteed transaction integrity, "two phase commit has to be handled in user programming if you're using more than one database right now," and without the help of synchronised optimisers. For those of us that can't help thinking of distributed database as item four and item four alone, what does IBM suggest we do with our data at in the meantime? "Put it where it makes most sense," said Starkey firmly. It was impossible to believe that IBM meant anything other than "Keep it on the mainframe."

'INDUSTRY NAMES: CMPT (Computers and Office Automation); INTL (Business, International)

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...are they? The answer is query speed and distributed database.Well, as the entire world knows distributed **database** means **many** things to many people, and most of them don't work. However on the query front, IBM...

...query. It has done this by using multiple index access paths or multi-index searching.Imagine a **query** that wants to explore three **separate** fields, dictating a maximum or minumum value to each and slim down the records just to those that comply. It is the sort of **query function** that relational databases seemed to be invented for, for instance "Find me all the employees that have...

30/5,K/26   (Item 1 from file: 553)
DIALOG(R)File 553:Wilson Bus. Abs. FullText

04341928   H.W. WILSON RECORD NUMBER: BWBA00091928   (USE FORMAT 7 FOR FULLTEXT)
On lean messaging with unfolding and unwrapping for electronic commerce.
Kimbrough, Steven O
Tan, Yao-Hua
International Journal of Electronic Commerce (Int J Electron Com) v. 5 no1 (Fall 2000) p. 83-108
DOCUMENT TYPE: Feature Article   ISSN: 1086-4415
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
RECORD TYPE: Abstract; Fulltext   RECORD STATUS: Corrected or revised record
WORD COUNT: 10104

ABSTRACT: EDI (electronic data interchange) messages are notoriously lean and difficult (or impossible) to interpret without additional information. The authors acknowledge the many criticisms of the EDI protocols, but argue that there is something basically co Reprinted by permission of the publisher.

DESCRIPTORS:
  Electronic commerce; Electronic data interchange
SIC CODES: 4822

(USE FORMAT 7 FOR FULLTEXT)

TEXT:
...   knowledge, and (b) the processing organization's knowledge base (see Figure 1).
    An aside to conclude this **section** .
    The existing software that performs the meaning unfolding process--so-called EDI translator software--is widely regarded...a CET and a look at the wrapper are required, as will be discussed in the next **section** .

    AN ASIDE ON MAPPING TO THE WORLD
No semantics can ever by entirely formal. At some point...here. Notice that the bridge laws ((15) and (16)) are completely general and use only the controlled **vocabulary** (verb **predicates** , thematic role predicates (from the controlled vocabulary of lean-event semantics), and predicates from the logic of...

30/5,K/27   (Item 2 from file: 553)
DIALOG(R)File 553:Wilson Bus. Abs. FullText

Figuring the bottom line.

ABSTRACT: Part of a special **section** on the factors that go into
shippers' bottom-line decisions to choose a nonvessel operating common
carrier examines the figuring of the bottom line. Although some larger NVOs
have taken aim at the full-container market, most still rely primarily on
LCL business. As every tariff is unique in structure and usage, it is
difficult to compare carrier and NVO rates. With similar commodities, the
base rates between the carrier types may show that the NVO can give a
better deal than the carrier. However, the shipper should note that extra
handling charges tacked onto the base rate may result in drastically
different rates, with the NVO's rate being no more competitive than the
carrier's. All rates are **predicated** on **weight** or measure, and three
standards have commonly been used by carriers, each of which is briefly
discussed. In addition, the way in which smaller shippers can save money on
LCL shipments through forming shipper associations is examined.

DESCRIPTORS:
  Nonvessel operating common carriers--Rates
SIC CODES: 4412

ABSTRACT: Part of a special **section** on the factors that go into
shippers' bottom-line decisions to choose a nonvessel operating common
carrier...

...rates, with the NVO's rate being no more competitive than the carrier's.
All rates are **predicated** on **weight** or measure, and three standards have
commonly been used by carriers, each of which is briefly discussed...

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 Set      Items     Description
 S1     1941920     QUER? OR SEARCH? OR REQUEST?
 S2       40877     (PLURAL? OR VARIOUS OR SEVERAL OR MULTIPL? OR MANY OR NUME-
                    ROUS OR UNLIMITED)(2N)(DATA()BASE? OR DATABASE?)
 S3       19475     PREDICATE?
 S4           7     S3 (2N)(DICTIONAR? OR GLOSSAR? OR LEXICON? OR VOCABULAR? OR
                    WORDBOOK?)
 S5         182     (STRENGTH OR WEIGHT OR SIGNIFICANCE OR INFLUENCE OR IMPORT-
                    ANCE) (10N) S3
 S6     1372165     DATABASE? OR DATA()BASE?
 S7     3357609     PARTITION? OR PARSE OR PARSING OR SPLIT? OR DIVIDE? OR SEC-
                    TION? OR SEGMENT? OR SEPARATE? (5N) S1
 S8       32211     (OPTIMIZ? OR PERFECT? OR FUNCTION? OR EFFECTIVE? OR EFFICI-
                    ENT?)(2N)S1
 S9           0     S4 (S) S5
 S10       1395     S7 (S) S2
 S11         15     S10 (S)'S8
 S12          0     S10 (S) S4
 S13          0     S10 (S) S5
 S14          0     S2 (S) S4
 S15          0     S2 (S) S5
 S16          0     S8 (S) S5
 S17          0     S8 (S) S4
 S18          0     S4 AND S5
 S19       9791     S7 AND S2
 S20        912     S19 AND S8
 S21          0     S19 AND S4
 S22          2     S19 AND S5
 S23         83     S7 AND S5
 S24          9     S7 (S) S5
 S25          0     S7 (S) S4
 S26          4     S7 AND S4
 S27         30     S11 OR S22 OR S24 OR S26
 S28         29     S27 NOT PY>2001
 S29         27     S28 NOT PD>20010228
 S30         27     RD (unique items)
 S31          7     S4 NOT PY>2001
 S32          7     S31 NOT PD>20010228
 S33          7     RD (unique items)
 S34          3     S33 NOT S30
 File  15:ABI/Inform(R) 1971-2003/Dec 11
          (c) 2003 ProQuest Info&Learning
 File 810:Business Wire 1986-1999/Feb 28
          (c) 1999 Business Wire
 File 647:CMP  Computer Fulltext 1988-2003/Dec W1
          (c) 2003 CMP Media, LLC
 File 275:Gale Group Computer DB(TM) 1983-2003/Dec 10
          (c) 2003 The Gale Group
 File 674:Computer News Fulltext 1989-2003/Dec W1
          (c) 2003 IDG Communications
 File 696:DIALOG Telecom. Newsletters 1995-2003/Dec 10
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          (c) 2003 McGraw-Hill Co. Inc
 File 636:Gale Group Newsletter DB(TM) 1987-2003/Dec 10
          (c) 2003 The Gale Group
 File 813:PR Newswire 1987-1999/Apr 30
          (c) 1999 PR Newswire Association Inc
 File 613:PR Newswire 1999-2003/Dec 11
          (c) 2003 PR Newswire Association Inc
 File  16:Gale Group PROMT(R) 1990-2003/Dec 10
          (c) 2003 The Gale Group
 File 160:Gale Group PROMT(R) 1972-1989
          (c) 1999 The Gale Group
 File 553:Wilson Bus. Abs. FullText 1982-2003/Oct
          (c) 2003 The HW Wilson Co
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34/3,K/1   (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

00503893 90-29650
A Production Model Construction System: PM Statement to Math Programming
Kendrick, David A.
Journal of Economic Dynamics & Control v14n2 PP: 219-236 May 1990
ISSN: 0165-1889 JRNL CODE: JED

...ABSTRACT: model construction process is the creation of mathematical
programming activities and constraints from the open and closed **vocabulary**
   predicates that are supplied by the user interface. The parameter and
variable indexes are constructed from the indexes...

34/3,K/2   (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01148149   SUPPLIER NUMBER: 00642769
A Generic Expert-System Tool for Non-AI Experts.
Systems & Software, v4, n8, p103
Aug., 1985
DOCUMENT TYPE: evaluaton   ISSN: 0039-8047   LANGUAGE: ENGLISH
RECORD TYPE: ABSTRACT

...ABSTRACT: for a users inexperienced with knowledge engineering. The
user contructs a rule base and an application-specific **vocabulary** .
Application-independent **predicate** functions are provided. IKE uses
backward-chaining inference which is illustrated graphically. Users can
check IKE's...

34/3,K/3   (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter.DB(TM)

03711768   Supplier Number: 48019642 (USE FORMAT 7 FOR FULLTEXT)
No universal formula for machine-aided indexing
Publishing Technology Review, v4, n9, pN/A
Oct 1, 1997
Language: English   Record Type: Fulltext
Document Type: Newsletter; Refereed; Trade
Word Count: 699

...   importance here is that the occurrence of names in articles is
highly dynamic so the use of **dictionaries** is not **predicated** .
    There is clear evidence that where indexing is a requirement, various
automated techniques can ease the process...